BURNING LOVE: RECORDABLE CD & DVD TESTED

MORE NEWS, MORE REVIEWS

www.macworld.co.uk

Macworld

iBook inside

Hands-on preview of 'iMac to go!'
Exclusive pics & reports

WIN! £1,500 film scanner



Upgrade now!

Don't wait: Get G3 faster today

Heavy-duty XPress

Expert tips for professional text

New games round-up

What you'll be playing tomorrow

TypeStyler 3 reviewed

Wow your friends with wild effects

Return to Issue Selector

IDG SEPTEMBER 1999 £4.99

Macworld

Ten Years of EXCELLENCE

contents

72 ***WE'VE BEEN WAITING FOR A YEAR, AND NOW APPLE HAS DELIVERED – IT'S THE CONSUMER PORTABLE iBOOK, THE iMAC TO GO. JUST ADD AIRPORT, AND YOUR WHOLE WORLD MIGHT GO WIRELESS.***

September 1999



COVER ILLUSTRATION JAMES WALKER

read me first

Simon Jary, editor-in-chief

The world is moving so fast these days that the total eclipse was over in the blink of an eye. Just as people are finally cottoning on to the fact that they'd better get hooked up to the Internet sharpish, another sea change washes over us. Because nowadays, it's not enough to be "wired". Today we must be "wireless".

"Weren't we all wireless before we were wired?", you cry… No, then you were "wired-less". There's quite a difference. You must have speedy access to the riches of the Internet, but not be tripping over modem cables and powerstrips every time you get to your feet. Ashamed of your tower of cable and wire mire? Take it easy, Apple has an answer for you: the iBook.

The big surprise of Apple's iBook – which looks like an iMac Bill Gates has dropped his wallet on (see News and feature, this issue) – is the fact that it's so unsurprising. Apart from a few neat details like the built-in CD drive and lack of latch, the iBook looks remarkably like a colourful PowerBook.

On closer inspection, however, the iBook is something totally new. *Film 99*'s Power-Mac-touting Jonathan Ross is going to just love it – it's a weal wireless wonder. OK, it's a lot bigger than Apple's old eMate, but it runs the Mac rather than the Newton operating system. And, sure, it's already got people making snide references to its weight problem; it's 6.6 pounds offset only somewhat by a handle that is, well, handy.

But it's no lightweight because it's no lightweight: it's a proper computer. Yes, a Mac Palm Pilot would be useful. But we also want a portable with a decent-sized screen and a full-sized keyboard. Apple knows – to its considerable cost – that we don't really need another Newton.

Nokia and others already provide devices for people who enjoy reading their email off a screen the size of half a KitKat. Take a break, Apple isn't in that game – although some degree of a real partnership with PowerPC pal Motorola would be interesting, in this regard.

When people snipe at the iBook's bulk, they're summoning the ghost of Apple's biggest bulky blunder: 1989's elephantine Mac Portable. This beast ran the Mac OS but weighed about the same as a Mini Metro. Famously, it used to break airline seat-tables. Put it on your lap, and it rivalled the Corgi Trouser Press for adding seams to your strides.

Despite its size and weight (less than half that of the Mac Portable but a few pounds greater than 1999's slimline PowerBook), the iBook is going to be on a lot of our wish lists come the autumn. Not because we think the PowerBook is too black. And not because the iBook clips shut like a cellphone.

We all want an iBook because of Apple's add-on AirPort technology. We go into a lot more detail about this in News (from page 18) and features (from page 72), but basically AirPort frees you from all the wires and cables normally associated with something as "wired" as Web browsing. Even iMac owners have to put up with more leads than the Queen's Corgi walker when they're online. With AirPort, the iBook can sit on your knee in the garden without ten metres of telephone wire stretching back to your phone socket. In fact, you might even be able to sit in your local's beer garden and still be in AirPort range. And, of course, as a portable there's no need for an equal amount of power cable. Indeed, if Apple is to be believed on the power stakes, you'll be in the pub till closing time with up to six hours juice from the iBook before it – if not you – requires a re-charge.

Sounds dreamy, doesn't it? Unfortunately, this Internet idyll is ruined by one of those ironic mechanical maxims: in order to be wireless, one must invest in more cable. If you want Net access faster than 56Kbps, you'll need to hook up a second, ISDN-linked Mac or an ISDN router and browse via 10Base-T ethernet. AirPort-assisted networking will be a boon for schools and even enlightened offices, but wireless wiredness is still dragged back by the ponderous problem of bandwidth.

Don't get me wrong about the iBook – unlike Peter Worlock (page 194) I think it's a beauty. What I'm putting the brakes on is the rush into believing the gospel of wireless working. It's the paperless office recycled. Relax, maybe the world isn't moving quite so fast after all… MW



83



89



99



105



features

72 iBook inside
Apple has finally unveilled its consumer portable – the iBook. *Macworld* gives you the full scoop.

83 Speed boost
David Fanning reviews the latest batch of G3 upgrade cards – and shows you how to rejuvenate your old Mac.

89 Burnt out
The latest CD-R, CD-RW and DVD-RAM drives tested and rated in the Macworld Test Centre.

11 This month's cover CD



opinions

43 **first contact**
DVD will storm the globe

45 **prochak**
The politics of the Web

47 **desktop critic**
Sibling rivalry

76 **vision thing**
iBook: it's in the detail

194 **worlock**
Long-distance virtuality

regulars

media

99 create print
Tag – you're IT
How to use XPress Tags.

105 create web
Site seeing
Improving the way we work.

109 create graphics
Making gods
Combining digital media with the world around us.

secrets

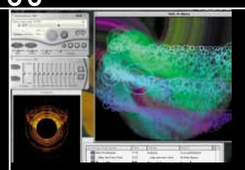
115 secrets
Hidden files
How to control invisible documents.

116 q&a
The master detective
Using Sherlock to speed-up your work.

69



68



94 competition



8 How to contact *Macworld*
Who's who, and who's won what

112-113 Macworld subscriptions
Unbelievable value! Get a free copy of Art Dabbler or Photo Soap when you subscribe!

96-97 Reader offers

140 Career Moves
Job vacancies. Get the right job here.

119 Buyers' Guide
Mac system advice; Star Ratings; plus a full year's index

137 Apple Reseller Guide
A complete listing of Apple accredited dealers for the whole of the UK. Plus, AppleCentre Focus.

141 Macworld Shopping
Consumer advice and mail-order ads

reviews

■ *Macworld has it covered*

48 MetaCreations Poser 4.0
49 Waves Pro FX bundle
50 Age of Empires
51 Falcon 4.0; Austin Powers Trivia
52 MYOB 7.5
55 MarkzScout; Vizion
57 4th Dimension 6.5; Opus 1.5
58 Polaroid SprintScan 4000; SoftRouter Plus 6.0.1
59 Enfocus PitStop 4.0.1; Adobe Type Manager Deluxe 4.5
61 TypeStyler III
62 Starry Night Pro 3.0
64 Commotion 2.0
66 Jam 2.5; WaveBurner; MasterList CD 2.1
68 FileWave Enterprise Edition 3.2; netOctopus 3.0; SoundJam MP

news

■ *in-depth stories* ■ *incisiveness* ■ *exclusive tests*

18-20 Macworld Expo, NY 99: iBook, Mac OS 9 Plus QuarkXPress 4.1 free
21 What's next, Apple?
26-27 Tomorrow's games today
28 MW Expo: Best of Show
32-33 Happy birthday, iMac!
35-40 Product News

Macworld

On / Off — The ultimate reference guide and news source for the Macintosh market.

Subscribe







Active / Inactive

Find out how you can get hold of either MetaCreation's Art Dabbler or Kai's Photo Soap **FREE** when you subscribe to *Macworld* – see pages 112-113.

? Subscribe

Macworld (UK) is an independent journal not affiliated with Apple Computer Inc.
Apple, the Apple logo, Mac, and Macintosh are registered trademarks, of Apple Computer Inc.

All contents © IDG 1999, except articles adapted from *Macworld* US, or from *MacWEEK* © Mac Publishing LLC.

Macworld is a publication of IDG Communications, 99 Gray's Inn Road, London WC1X 8UT.
Telephone: *(0171) 831 9252* Editorial fax: *(0171) 405 5308*
Sales fax: *(0171) 405 0262*
ISSN 0957-2341

Colour Origination: Lumis Colour
Printed by Polestar Watmoughs Ltd
Macworld is printed on paper produced in sustainable forests.

*Macworld editorial domestic Internet access courtesy of those nice people at Direct Connection (0800 072 0000, **www.dircon.net**)*

MACWORLD SUBSCRIPTIONS: *01858 435 304*

A subscription to Macworld includes 12 issues, 12 CDs and a FREE copy of either MetaCreations Art Dabbler or Kai's Photo Soap (see pages 112-113).

UK	Europe	ROW
£44.66	£88.97	£113.98

To subscribe, please use one of the following methods:
By post:
Macworld Subscriptions, FREEPOST (WC4336), Leicester, LE87 4DE.
By fax: **01858 434 958**
By phone: **01858 435 304**
By email: idg@subscription.co.uk

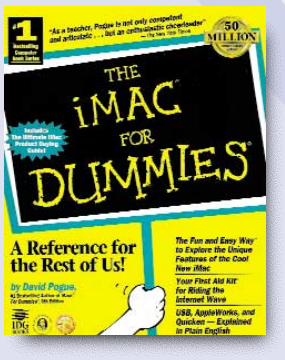
If you have a query about a current subscription please call 01858 435 303

Contacts

who...		@
	Editor-in-Chief	Simon Jary — *editor@macworld.co.uk*
	Executive Editor/Reviews	David Fanning — *david_fanning@macworld.co.uk*
	Staff Writer	Louise Banbury — *louise_banbury@macworld.co.uk*
	Production Editor	Sean Ashcroft — *sean_ashcroft@macworld.co.uk*
	Sub Editor	Woody Phillips — *woody@macworld.co.uk*
	Art Director	Mandie Johnson — *mandie_johnson@macworld.co.uk*
	Art Editor	James Walker — *james_walker@macworld.co.uk*
	Designer	David Grant — *david_grant@macworld.co.uk*
	Managing Editor/Online	Gillian Robertson — *gillian_robertson@macworld.co.uk*
	Editorial Assistant	Selena Laye — *selena@macworld.co.uk*
	CD Editor	Vic Lennard
	US Editor	Andrew Gore
	Contributing editors	Peter Worlock, David Pogue, Deke McClelland, Lon Poole, Michael Prochak, Ian Winter, Simon Eccles, Joseph Schorr, Franklin Tessler, Bruce Fraser, Christopher Breen, David Biedny, Matthew Bath
	Group Ad Manager	Anne Ridyard — *anne_ridyard@macworld.co.uk*
	Advertising Manager	Mustafa Mustafa — *mustafa@macworld.co.uk*
	Display Sales Executive	Dean Payn — *dean_payn@macworld.co.uk*
	Classified Sales Executives	James Poulson, Sarah Maher
	Production Manager	Sharon Bird — *sharonb@idglondon.co.uk*
	Deputy Production Manager	Richard Bailey — *richardb@macworld.co.uk*
	Production Assistant	Sam French — *samf@macworld.co.uk*
	Marketing/Circulation M'ger	Sarah Bagnall — *sarah_bagnall@macworld.co.uk*
	Marketing Executive	Jo Brown — *jo_brown@macworld.co.uk*
	Direct Marketing Executive	Jim Birch — *jim_birch@macworld.co.uk*
	Publisher	Guy Eaton — *guy_eaton@macworld.co.uk*

New User / New Group / Open / Duplicate / Delete

What a lot of winners! The July issue of *Macworld* had more fantastic competitions. See if you're one of the winners…*Macworld* and **CE Software** offered five copies of **QuickKeys 4.0**. The winners are: Mr Douglas Durrem, London; Mr Moor, Bristol; Mr Norman Redfern, London; Mr John Hociej, Essex; and, Mr Robert McMinn of Nottingham. Five readers also won copies of RealPlayer G2 from *Macworld* and **RealNetworks**: Mr Jerry Hobday, London; Mr Edward Young, Belfast; Mr Daniel Cohen, London; Mr Edward Connolly, Belfast; and Mr Steve Edgell of London. We had ten copies of **Suitcase 8** by **Extensis,** now belonging to: Mr W Parkin, Gwent; Mr Steven James, London; Mr Shaun Jewitt, Lancashire; Mr Peter Wood, Hampshire; Mr Darren Southworth, London; Mr Freddy Fricker, Surrey; Mr Lynne Joyce, West Yorkshire; Ms Phillipa Guppy, Dorset; Mr Andy Davies, London; and Mr Steve Edgell of London. **IDG Books** helped us give away five copies of **iMac for Dummies**, to: Mr Ian Woodward, Berkshire; Susan Hird, Surrey; Mr Michael Balldry, Hampshire; Mr Adam J Stout, Hertfordshire; Sue Blessett, London. **Softline** and *Macworld* proudly present five copies of **Starcraft**, to: Mr Garry Myles, London; Mr John Hobbes, Leicestershire; Mr Graham Healer, Lancashire; Mr John Haskins, Northamptonshire; and Mr Colin McWilliams of London. The winners of the Pantone competition, featured in the June issue of *Macworld*, are as follows: Miss N Dillon, Glasgow; Mr I Williamson, E Sussex; Mr S West, Edinburgh; and Ms A Sen of London.



IDG World Leaders in IT Publishing

Macworld is a publication of International Data Group, the world's largest publisher of computer-related information, and the leading global provider of information services on information technology. International Data Group publishes over 275 computer publications in more than 75 countries. Ninety million people read one or more International Data Group publications each month. International Data Group's publications include: Argentina's Buyer's Guide, Computerworld, PC World; Australia's Computerworld, IT Casebook, Macworld, Network World, PC World, Publish, Reseller News, Webmaster; Austria's Computerwelt Oesterreich, Networks, PC Tip; Bangladesh's PC World; Belarus's PC World; Belgium's Data News; Brazil's Annuário de Informática, Computerworld, Connections, Macworld, PC Player, PC World, Publish, Reseller News, Supergamepower; Bulgaria's Computerworld, Network World, PC & Macworld; Canada's CIO, Client/Server World, ComputerWorld, InfoWorld, NetworkWorld, WebWorld; Chile's Computerworld, PC World; Colombia's Computerworld, PC World; Costa Rica's PC World; Czech and Slovak Republic's Computerworld, Macworld, PC World; Denmark's Communications World, Computerworld, Macworld, PC World, Techworld; Dominican Republic's PC World; Ecuador's PC World; Egypt's Computerworld, PC World; El Salvador's PC World; Finland's Mikro PC, Tietoverkko, Tietoviikko; France's Distributique, Hebdo, InfoPC, Le Monde Infomatique, Macworld, Reseaux & Telecoms, WebMaster; Germany's Computer Partner, Computerwoche/ Extra/Focus, Global Online, Macwelt, PC Welt; Greece's Amiga Computing, GamePro, Multimedia World; Guatemala's PC World; Honduras's PC World; Hong Kong's Computerworld, PC World, Publish; Hungary's ABCD CD-ROM, Computerworld SZT, Internetto Online, PC World, PC-X Magazin; Iceland's Tolvuheimur PC World Island; India's Information Communications World, Computerworld, PC World, Publish; Indonesia's InfoKomputer PC World, Komputek Computerworld, Publish; Ireland's Computerscope, PC Live!; Israel's Macworld, People & Computers/Computerworld; Italy's Computerworld, Macworld, Networking, PC World; Japan's DTP World, Macworld, Nikkei Personal Computing, OS/2 World, SunWorld, Windows NT World, Windows World; Kenya's PC World; Korea's Hi-Tech Information, Macworld, PC World; Macedonia's PC World; Malaysia's Computerworld, PC World, Publish; Malta's PC World; Mexico's Computerworld, PC World; Myanmar's PC World; The Netherlands' Computer! Totaal, LAN Internetworking, LAN World Buyers Guide, Macworld; New Zealand's Absolute Beginners Guide and Plain & Simple Series, Computer Buyer, Computer Industry Directory, Computerworld, MTB, Networked World, PC World; Nicaragua's PC World; Norway's Computerworld, CW Rapport, Datamagasinet, Financial Rapport, Kursguide, Macworld, Multimedia World, PC World, PC World Ekspress. PC World Nettverk, PC World ProduktGuide; Pakistan's Computerworld, PC World; Panama's PC World; People's Republic of China's Computer Users, Computerworld, Computer and Communication, Electronic Design, Electronics Today/Weekly, Game Software, InfoWorld, PC World, Popular Computer Week, Software Weekly, Software World, Telecom World/Weekly; Peru's Computerworld, PC World Professional, PC World SoHo; Philippines' Click!, Computerworld, PC World, Publish; Poland's Computerworld/Special Report, Cyber, Macworld, Networld, PC World Komputer; Portugal's Cerebro/PC World, Computerworld/Correio Informático, Dealer World, Mac*In/PC*In Portugal, Multimedia World; Puerto Rico's PC World; Romania's Computerworld, PC World, Telecom; Russia's Computerworld, Mir PK, Publish, Seti; Singapore's Computerworld, PC World, Publish; Slovenia's Monitor; South Africa's Computing, Network World, Software World; Spain's Communicaciones World, Computerworld, Dealer World, Macworld, PC World; Sweden's CAP&Design, Computer, Corporate Computing, InternetWorld, it.branschen, Macworld, MaxiData, MikroDatorn, Nätverk & Kommunikation, PC World, PCaktiv, Windows World; Switzerland's Computerworld, Macworld, PCtip; Taiwan's Computerworld, Macworld, NEW ViSiON/Publish, PC World, Windows World; Thailand's Publish, Thai Computerworld; Turkey's Computerworld, Macworld, Network World, PC World; Ukraine's Computerworld, Multimedia World, PC World; United Kingdom's Digit, Macworld, PC Advisor, PC Home, ; United States' Cable in the Classroom, CIO Magazine, Computerworld, DOS World, Federal Computer Week, GamePro, InfoWorld, I-Way, Macworld, Netscape World, Network World, PC Games, PC World, Publish, Video Event, WebMaster; ***Uruguay's*** InfoWorld; ***Venezuela's*** Computerworld, PC World; ***Vietnam's*** PC World.



Macworld

Over 650MB of the very best trials, demos, shareware, games, utilities and updaters fill the Macworld CD this month – that's over 6,000 files! Vic Lennard introduces the leading contenders…



Install Me

Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

■ QuickTime 3.0.2

Many of the demos need this installed. It gives you new versions of QuickTime and the MPEG, VR, Musical Instruments and PowerPlug add-ons.

■ Acrobat Reader 4

Install this version to be able to read many of the on-screen manuals.

■ StuffIt Expander and DropStuff

Versions 4.5 & 5.1.2 are included.

■ Also included

A number of useful utilities such as Apple Game Sprockets 1.1.4, InternetConfig 2.0 and Apple Appearance – plus essential items such as Apple Disk Copy and Drive Setup.

Terran Media Cleaner Pro 4.0

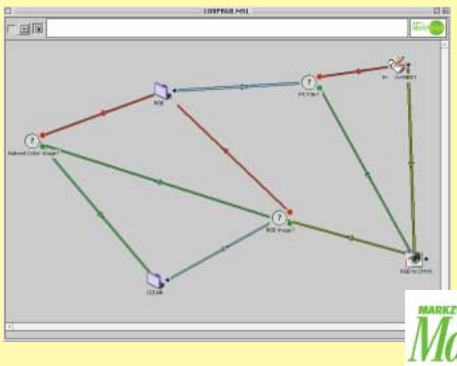


Media Cleaner Pro is a dedicated optimization and compression application. You can efficiently optimize and compress video, audio and still images for delivery on the Web, broadband networks, CD-ROM, DVD and PowerPoint presentations. Media Cleaner Pro quickly and easily outputs the highest-quality QuickTime, RealG2, Windows Media (ASF), MPEG-1, DV, AVI, MP3 and various audio and still image formats from a single batch. Cleaner also supports an optional MPEG-2 encoder.

Additionally, Media Cleaner possesses a powerful array of image processing and time-saving features. Batch process up to 2000 movies with facilities such as: high-quality crop and scale, variable bitrate (VBR) control, Adaptive Noise Reduction, A/V filters, pro-quality audio processing, colour adjustment and watermarking – all with a Dynamic Preview to ensure the highest-quality results.

This demo version gives you full access to all features, with the exception of GIF encoding and URL links at the end of movies, and will work for 50 uses or 30 days (whichever comes first), and produce clips up to 15 seconds long. All video and images will be watermarked, and most movies will have an end frame with a URL link to Terran added.

Marzware MarkzScout



MarkzScout offers native-document checking and routing of failed or passed files based on user-definable custom rules. It examines job elements in native documents and separates the files appropriately within any prepress workflow system. Built into MarkzScout is technology that processes documents created from QuarkXPress, PageMaker, FreeHand, Illustrator, CorelDraw, including formats such as EPS, TIFF and JPEG.

MarkzScout can be controlled by user-definable rules for extremely quick preflighting decisions and a more efficient workflow. It comes preconfigured with an extensive set of over 300 ready-to-use rules to check for pre-press errors, such as: use of RGB colours, missing fonts and incorrect image resolutions. Specific custom rules can also be created based on SimpleText scripting, allowing the number of possible rules to be limitless.

This fully-featured trial lasts for 14 days from first installation.

Serious Software

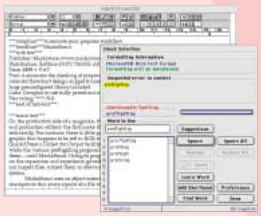


Pitstop Pro 4.01

Enfocus PitStop 4.01 is a plug-in for Adobe Acrobat 4.0 that allows editing and preflighting of PDF documents. Any PDF document can be edited in Adobe Acrobat 4.0 no matter where it was originally created. Edit, move, scale, rotate, and colour text and graphics in just a matter of seconds. Add new or change existing objects and text in PDF documents with a full set of editing tools; copy and paste objects, images, and text between PDF documents; use any system font or any embedded font when adding or editing text. Other features include: node editing and bézier control points in paths and masks; numerical control over position and size of objects; unlimited undo and redo; zoom in up to 1,600 per cent to work on details; edit in preview or wireframe viewing mode; apply overprint settings to objects. This fully-functional trial will time-out after 30 days.

Spell Catcher 8 demo





The original Spell Catcher built its reputation on the fact that it was a global tool that could work in any program. With Spell Catcher 8, you no longer have to select the programs in which it will work – it is automatically available in every program and is now a full-fledged application. It has a smarter, larger word list, provides more, and better, suggestions when you make a typo, and lets you look up the definitions of English words. The interactive mode tracks multiple errors so that you can correct several in one fell swoop. The Suggest Spelling and Lookup windows are now floating windows, making Spell Catcher 8's interactive checking compatible with many more applications, including graphics programs.

This demo version expires 14 days after installation and is fully functional aside from the lack of multiple languages and certain reference sections.

SoundJam MP demo





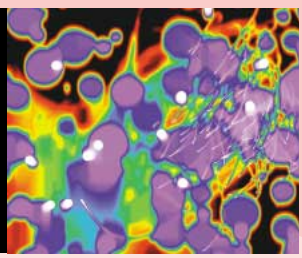


SoundJam MP brings today's hottest audio technology to the Mac, being the first full-featured, all-in-one MP3 Player and Super Fast Encoder. It converts music quickly into high-quality MP3s from CD, AIFF, QuickTime and WAV formats, taking full advantage of the 10:1 compression ratio of the MP3 format. This allows you to compress music to a fraction of its size, while maintaining near-CD quality. It also plays MP3 music streams over the Internet.

This fully functional demo is capable of ten MP3 conversions and will expire after seven days.

Don't miss…

- **Cool Extras!** — *Work Faker* – I'm working, I'm working!
  Pixel Toy 2.0 – Lava lamps on a Mac
- **Serious Software** — *POV-Ray 3.1* – Fabulous 3-D renderer
- **Mac ISP** — Abel Internet's free Internet access offer



Also on the CD

APPLE *(in the System Utilities folder) including:*
ATI Video SW Update 1.0
FireWire 2.1
Mac OS ROM Update 1.0

COMMS & INTERNET
30 applications including:
BBprofiler
Email Merge 1.7.7
MacTuner 2.0.8
Sherlock Menu 2.1

EDUCATION
Three programs including:
WordCoach

FONTS
Font Fixer for 8.6

GRAPHICS
12 items including:
PhotoGIF 3.5
Rainbow Painter 1.2.0
Screen Gear 3.2.1
Snapz Pro 2.0.1



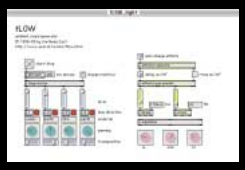
ICONS
Over 300 superb icons courtesy of IconFactory.

INFO
Six items including:
1984 OLM Issue 15
About This Particular Mac 5.07
Apple Wizards – July 1999
My Mac Magazine #51
plus eight items for developers

MATHS & SCIENCE
10 utilities including:
ArtMatic
Periodic Table 1.3
Planet Earth 2.0.6

NETWORK
MacAT Folder 4.6.1
ServerInfo PPC

SOUND & MUSIC
Eight applications including:
fLOW Light
QuickMP3 1.4
The Musician 3.0.2



ANTI VIRUS
Four items for your data's continuing protection.

UTILITIES
Ten categories comprising over 80 useful tools for your Mac including:
Alpha 7.2
AppWatcher 2.2
DragThing 2.7
Dumpster 3.4.1
MacArmyKnife
Reunion Planner 4.1.8
TattleTech 2.80
Tex-Edit Plus 2.6
YankPro 3.1

UPDATERS
This month's dedicated updaters folder sports 100Mb of patches to bring many popular applications bang up-to-date, including:
Adobe Illustrator 8.0.1
BBEdit 5.1.1
Commotion 2.1
Eudora Pro 4.2.1
Norton AntiVirus (07/99)
Painter 3D
Pro Tools 4.3.2
SAM (07/99)
Tailor 2.0.8
Vicom Internet Gateway 6.0.3
Vicom SoftRouter Plus 6.0.3
Virex (07/99)

Other demos include:

4th Dimension 6.5
AdAgent
BBEdit 5.1
Excourse stEPS 1.2
Final Draft
FotoPage Pro
M.Y.O.B. 7.5
Opus 2.0
SiteCam 4.0.1
Timbuktu Pro 5.0.1
Tokyo 2.0
Vision DSP



Shareware

Many programs on this CD are shareware, which means that if you keep them and use them for more than the allowed time (usually up to 30 days) then you must pay for them. Treat shareware as budget-priced commercial programs – support shareware authors so that they continue to provide high-quality programs for the Mac.

Age of Empires



If you had the option, how would you rule the world? Would you conquer enemy civilizations? Discover the world's secrets? Accumulate wealth?

As the guiding spirit of a Stone Age Tribe, follow one of these paths to build the greatest civilization on earth. Use the limited resources to build and manage your civilization into a powerful empire. Direct a research path that leads to the economic, military or naval technologies best used to achieve game goals. Build powerful armies from dozens of military units including warships, chariots and war elephants. Challenge a sophisticated and adjustable artificial intelligence for endless replay value.

The demo offers a choice of two solo campaigns – and limitless time to fail until you succeed in your goal to rule the world!

Games World

Our Hot Demos sport three great new games. **Bugdom** is a real cutesy 3D action game. You are Rollie McFly, the only remaining bug capable of saving the Lady Bugs and restoring peace to the Bugdom (requires QuickTime 4.0). If you're into flying sims, then try **Virtual Wings Professional**, a flight training simulator with authentic aircraft panels, OEM aircraft systems and navigation instrumentation. Or try an early preview of **WWII SkyFighters 2000**, familiarize yourself with how the aircraft fly, take off, land and shoot down other aircraft. And ever fancied writing your own adventure game? Then load up **Adventure Creator**.

This month's Top 10 shareware games really are the pick of the crop, with action games like **Vortex**, **Triple-A 1.5.1** and **Bub & Bob 1.4.3**, puzzles such as **Trinity 1.0.3** and **Dr. Max** – and **Squirrel Kombat!** There are also updaters for **Falcon 4.0**, **Myth II**, **Railroad Tycoon** and **Age of Empires**.

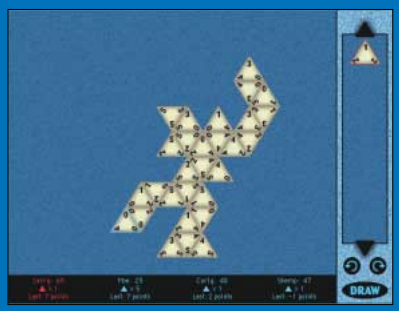


Virtual Wings Professional

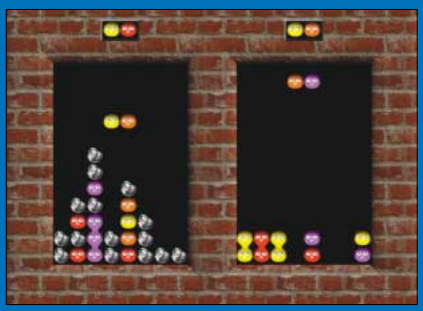


Bugdom

Trinity



MacPuyo



FAULTY COVER CD-ROM?

If your cover CD doesn't seem to work as it should please check you have read all the instructions on the cover disc pages carefully first. If it still doesn't work then please email Gillian Robertson at gillian_robertson@macworld.co.uk

If your cover disc is broken and you want a replacement CD, please call Emiliegh Borrett on 0171 831 9252 or send an email to: emiliegh_borrett@macworld.co.uk

Macworld CD catalogue

Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 and '99 – almost 120,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (1.1.4) is also included – don't forget to register if you find our library useful.



Macworld EXPO

It's the look! iBook of love



Apple's new consumer portable Mac, the iBook, was an instant hit at Macworld Expo, New York

Apple promised to "blow everything else out there away" when it completed its product matrix with the introduction of the £1,099 (£1,299 inc. VAT) iBook on the first day of this year's Macworld Expo in New York. The two-colour portable Mac aimed at consumers, the education market, and all followers of fashion is armed with a speedy G3 processor, sizable screen, incredible battery life and breathtaking wireless technology – all wrapped up in Apple's stylish translucent plastics.

Apple interim CEO Steve Jobs ended a year's worth of intense speculation when he unveiled the iBook, "the iMac to go!". He described it as a "rocket ship", packing a 300MHz G3 PowerPC processor with 512K of backside cache.

Jobs claimed that it is "the second fastest laptop in the world" – being beaten in the speed stakes only by Apple's own professional-aimed PowerBook portable computer.

The iBook comes with 32MB of RAM (upgradeable to 160MB), a 24-speed CD-ROM drive, 3.2GB hard drive, 56Kbps modem, USB and 10/100BaseT ethernet networking. Unusual for consumer laptops, it features a full-sized keyboard – with user-customizable F7-F12 keys.

The iBook's display – its "window into the Internet" as Jobs described it – is a 12.1-inch TFT screen, capable of 800-x-600-pixel resolution. It is powered by ATI's RAGE Mobility accelerator, with 4MB of VRAM.

With all that juice and screen acreage, Jobs was delighted to announce that Apple engineers had managed to squeeze a "groundbreaking" six hours of battery life from the sexy machine. Jobs claimed that this will mean no need for a charger for most portable workers. Those that do require extra hours will be happy with the cute matching charger that impressed portables experts with its facility to wrap cable around its yoyo-like casing.

But what impressed the experts and excited the crowd the most was the iBook's amazing optimized wireless capabilities that go "beyond terrestrial ethernet". Apple engineers worked with boffins from Lucent Technologies to free iBook users from being "tied to the plug". The AirPort wireless LAN technology, performing at up to 11 megabits (about 1MB) per second, is the first practical application of a new industry standard, 802.11b wireless communications.

The iBook becomes a truly wireless device with the addition of a £199 AirPort Base Station – reminiscent of the spaceship in *The Day the Earth Stood Still* – and a £69 AirPort card. With these two add-ons, iBook users can network and browse the Internet with their portables up to 150-feet away from the Base Station. Jobs quipped that "that's a bigger distance than anyone's home I know – apart from Bill Gates, and he can afford two!".

The PC space is awash with home-networking products, both wired and wireless, none of which even come close to Apple's claimed performance for the AirPort. What's truly mind-boggling is Apple's speed claim for the AirPort: At 11 megabits per second, the AirPort is faster than a speeding bullet. Most other wireless home networking products claim only 1 or 2 Mbps.

The Home Phone Networking Alliance (HomePNA) has just announced initial work on its version 2.0 specification, to be completed in the second half of 1999. HomePNA products create a network over the phone lines in your house without disrupting voice traffic. But even with the advantage of a wire-transmission medium, HomePNA devices have been limited to 1Mbps. The 2.0 spec bumps that to 10Mbps – standard ethernet speed. If it works as promised, the AirPort has them all beat. To quote *Spinal Tap*'s Nigel Tufnel, "This one goes to eleven".

Jobs promised that, as with USB and FireWire (and ethernet and CD-ROM before that), Apple would be "first and best" with this technology.

The iBook looks like a cross between a PowerBook and an iMac, and it comes in two colours: tangerine and blueberry. Built with polycarbonate plastics and double-shot in coloured rubber for safety and protection, the iBook received whoops of praise from the thousands-strong keynote crowd for its see-through handle – something no other consumer laptop can boast. Unlike other portables, the iBook has no latch. Instead, it clips shut like a cellphone.



Linda Frager, Apple's consumer mobile product manager, told *Macworld* that the company wanted the iBook to "survive in a backpack" – hence the co-molded rubber and lack of latch. She defended the limited, base 32MB RAM by claiming most consumers "often use only one application at a time". It is likely, however, that most will soon need to at least double the onboard memory – costing about £30.

As for the two colour options, she claimed that tangerine and blueberry "looked the most beautiful". Because the rubber is co-molded, each of Apple's iMac "fruity flavours" came out darker than previously. One Apple source told *Macworld* that the Lime flavour looked like "slime" in iBook rubber. Jobs joked that the iBook's back "looks more beautiful than the other guys' front" when he compared the new consumer portable to the current bestselling laptop.

Apple would not confirm iBook pricing – see **www.macworld.co.uk** for latest information.



The Good (i)Book
With iMac style and rugged rubberized plastics (above), Apple has again turned the world of computer design on its head. The innovative AirPort (below) is also the first in a brave new world of fast wireless portable computing.



iBook add-ons already

Third-party vendors are already polishing up add-on products for the iBook. VST's will offer 4GB and 6GB USB hard drives in blueberry and tangerine. VST also plans to ship a 12-volt DC auto adaptor and an AC adaptor, iBook battery and Base Station Charger, which will be able to charge multiple iBook batteries simultaneously.

Griffin Technology is developing a USB audio adaptor – the iMic – for connecting a microphone or other sound-input device to the iBook. It has a USB output and RCA left and right inputs, and supports a wide range of microphones.

The iBook will gain a USB video-out option thanks to the USBPresenter from AVerMedia. Due in early October for less than £100, the device mirrors computer-screen images to TVs and other video display and recording equipment and outputs to a PAL or NTSC (composite or S-Video) video source. Powered by the USB port, the device will support video at up to 30 frames per second. MW

– Simon Jary, Wendy Mattson & Cameron Crotty

■ For *Macworld*'s hands-on experience with the iBook, see feature starting on page 72.

Official: Mac OS 9

Come October you can have "a whole new Mac for just £59 ($99)" claimed Apple CEO Steve Jobs during his opening keynote at Macworld Expo in New York. That "new Mac" will be your's by installing the latest version of Apple's operating system, Mac OS 9 – code-named *Sonata*.

Steve Jobs and Apple vice-president Phil Schiller demoed Mac OS 9 by picking one of 50 new features, Sherlock II – an enhanced version of the innovative Apple search engine. For more details on Mac OS 9, see *Macworld*, July 1999.

Free XPress 4.1 upgrade, Immedia integrated in 5.0

Later this year, Quark is set to to release a free upgrade to its market-leading page-layout application, QuarkXPress. Looking further ahead, company chief Tim Gill also demoed XPress 5.0 on a recent visit to London. As rival Adobe puts the finishing touches to its next-generation graphical DTP package, InDesign, Quark claims its upgrade improves XPress's stability and performance – as well as adding some neat new features.

QuarkXPress 4.1 includes improved import and export of PDF and HTML files. "We're committed to integrating the standards and technologies that our customers want to use," said product manager Don Lohse.

Quark claims to have made page layout "faster and easier". New features include a scissors tool, enhanced step and repeats, more accurate guide placement, access to recent documents, direct RGB output, and the ability to define custom page bleeds.

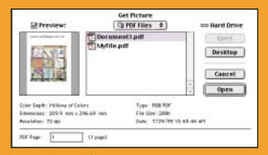
The upgrade will also include QuarkLink, a new feature designed to give users direct Internet access to a variety of technical and customer-service information from Quark's Web sites. The free upgrade will be distributed to all registered users of QuarkXPress 4.0. It will also be available for download from **www.quark.co.uk**.

During his keynote address at the Total Publishing exhibition, Quark founder and chief technical officer, Tim Gill, gave brief demos of QuarkXPress 5.0 and other key products: Troika, Quark DMS and Quark Publishing System 2.0.

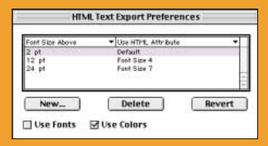
Gill gave his thoughts on Quark's potential competitor, Adobe InDesign: "All the features in InDesign are in, or will be in QuarkXPress," he claimed.

"We were in competition with PageMaker for years, but then PageMaker languished. InDesign may get us back to that position – and it's a more fun position to be in – where I'm terrified of Adobe's next release, so we release a better one, and they're terrified of ours and so on," he said.

A shipping schedule for XPress 5.0 has not been announced, but Gill said it would be in 2000. InDesign is scheduled for release in late August 1999 but may slip to September.



Import-ant format
In response to the core functionality of Adobe's forthcoming InDesign, XPress 4.1 offers better proofing and placement of PDF files in XPress docs.



Net gain
An improved HTML filter converts XPress text into HTML, and adds the ability to import HTML into QuarkXPress documents

XPress 5.0's main features include layers and PDF import-&-export-support and tables that can be created with a table tool and palette. The upgrade will also be more "Web-enabled", with the ability to export as HTML.

Quark also announced plans to use elements of its otherwise neglected QuarkImmedia multimedia technology to add rich, standards-based Web capabilities to XPress and other forthcoming products.

Mark Lemmons, Quark's Internet Publishing Business Unit Manager, denied that QuarkImmedia had been definitely cancelled as a stand-alone product. "In many ways QuarkImmedia was ahead of its time when it was released, and therefore required the use of proprietary viewers.

"There's still a chance that Quark may release a new version of QuarkImmedia, if the market demands it." MW

– Louise Banbury & Simon Jary

For the information as it happens visit Macworld Online Daily News (**www.macworld.co.uk**), updated five times a week

For the information as it happens visit Macworld Online Daily News (**www.macworld.co.uk**) updated five times a week

Macworld EXPO

All hail iBook!

Expo explodes in giant consumer-portable love fest. And Macworld Online poll predicts iBook success, but demands more memory.

Instead of racing to the exhibit floor after Steve Jobs' keynote address at Macworld Expo, many people lingered in the giant hall, huddling around the hundred Apple employees who stood tethered to iBooks (see photo). Words like "amazing" and "awesome" filled the air as people ran their fingers across the super-thin iBook. They pinched at the durable rubber lining, and lifted up the keyboards to peer at the slots where they can add more RAM and wireless technology.



iBook worms
Expo keynote attendees swarmed around specially placed Apple representatives to get a feel of the consumer portable.

Everything and more

Attendee Martin Maher praised the company for keeping the consumer in mind when it planned the machine: "It looks friendly".

Jim Williams of reseller Multiple Zones was impressed: "The iBook marks a huge change for the way we network. In the education sector wireless networking eliminates the problem of security – no more problems buying a secure unit, just pick the whole thing up and take it home."

Maneesh Patel, MD of Mygate, agreed that the iBook would be a success: "When you look at it, vis-à-vis the features, the price is about right. I think it will absolutely fly. I was hoping that they'd bring it out in all the different iMac colours, because they have built that market up."

Mark Wood, director of Channel Dynamics, thinks the iBook is too expensive: "I can't see parents in the UK running out to spend that much on an iBook for their kids. But I'm glad they've kept it to just two colours, as having everything in five iMac colours was too complicated."

Hundreds of *Macworld* readers answered an online poll. The verdict: "Love it! I want one." Rob Cumberland thinks it's a "a maximum prime stonker". People were complimentary about the wireless networking and particulars, such as the handle and rugged plastics. Thomas Horton thinks "the carrying handle is a miracle in itself".

Many wanted to see it in the full range of iMac colours. Phillip Briggs asked: "Is Apple just dipping its toes in the water?". Mark Lowe wasn't alone in asking for an iBook with "grey translucent shell". Others were disappointed that there was no DVD option.

Stuart Ramdeen, of Cranford Community School, was miffed by the lack of a video out: "Kids will want to present their ideas in a classroom by connecting it to a larger monitor or LCD projector".

Most complaints centred on the limited 32MB RAM: "The attractiveness of an all-in-one unit is negated by the fact that as soon as they try to run any software other than Mac OS 8.6 and SimpleText they are going to hit memory issues and will have to install more memory," said reader Nik Green.

Niggles aside, just about everyone seems to have fallen in love with the iBook – even though reader David Jefferis of Alpha Communications thinks it's a "bit girlie". MW

– Lisa Bowman & Louise Banbury



iBook at home in school

Although Steve Jobs was largely silent on the educational merits of the iBook, the new consumer portable does have some school-specific features unmentioned so far during the Expo keynote. Linda Frager, Apple's product manager for consumer mobile product marketing, talked to *Macworld* exclusively on this.

The two charging contacts located on the underside of the iBook (see left) were designed to enable fast, easy charging of multiple iBooks without requiring removal of batteries and without the need to plug each unit individually into a powerstrip.

Frager explains: "Historically, schools have created a lab environment for computer use, because of the expense and logistics associated with bringing numerous ethernet drops and power outlets into each classroom. Imagine a school that has purchased 20 iBooks with the goal of getting more computers into the hands of more students.

"With up to six hours of battery life, and AirPort capability, the school now has the ability to create a portable, networked lab. Rather than the students leaving the classroom to go to the computer lab, the computer lab can now come to the students – and no extra ethernet drops or power outlets are required."

Apple's is hoping that a third party can develop a special cart on wheels that would house all 20 systems (or more, or less) and enable them to be moved from room to room. Add an AirPort Base Stations, hooked up to an classroom ethernet drop, and all the students are simultaneously on the Internet or the campus network – without adding 20 ethernet drops and 20 power plugs into the classroom.

Frager continues: "If the portable lab cart has the mated charging contacts to iBook, then charging is as simple as setting each iBook into its specific slot on the mobile cart. Plug the cart in and all units are being simultaneously charged, while not in use."

Frager would not discuss future projects from third parties or Apple itself. MW

So, Apple, what next

With the wave of a hula hoop at Macworld Expo, Steve Jobs answered the last question about Apple's product line and raised a new one: What comes next?

Jobs used the hula hoop to introduce the company's iBook consumer portable, running it through the hoop to show that it was indeed wirelessly connected to the Internet. With the iBook, Jobs jumped through a daunting business hoop of his own. He needed one year to create products in four quadrants (professional and consumer desktops and portables) and just two years to make Apple a comeback king, a feat perhaps unduplicated in tech history.

Now the question becomes: How does the company sustain its momentum?

The question makes Phil Schiller, Apple's head of product marketing, roll his eyes. "Can't you guys give us break?" he said. "We haven't even started to ship the iBook, and now everyone wants to know what's happening after that."

Not that Apple doesn't have a plan for sustaining momentum. Schiller listed plans for the coming year: releasing the iBook in time for the school season, shipping Mac OS 9 this year and OS X Consumer after that – plus a new line of G4-powered computers, due early next year.

Tim Bajarin, president of Creative Strategies, said that "the fact that Jobs has filled the quadrants doesn't mean he can't keep innovating. There's lots of stuff he can still do."

But most importantly, Schiller said, the company's future depends on avoiding the mistakes that got it into trouble the first time around: "We can't be arrogant again. We need to keep setting high goals. We have to keep the pedal to the metal," Schiller said.

Apple's rise in the late 1980s was thwarted in part by the company's complacency and loss of focus. But Jobs, master of suspense and surprise, seems determined not to let that happen again.

A pocket Mac? Though Apple executives remain mum on plans for additional classes of computers, company watchers fully expect handhelds to be among Apple's future offerings.

"What's next for Apple? One space is the handheld," said Jimmy Duvall, a marketing manager at Lotus, who was showing off his company's new Notes 5 for the Mac.

Bajarin also believes the handheld holds appeal for Apple, especially after seeing the crowds that flocked to 3Com's Palm booth at Macworld.

"I'm looking for what I call the pocket Mac," Bajarin said. "Steve has to realize these PDAs have gone past the novelty phase."

Bajarin said Apple has to decide whether to build its own device from scratch or license from another company. The company christened the handheld market in the early 1990s with the Newton, a portable computer featuring then-cutting-edge technology such as infrared.

Apple ditched the Newton two years ago, with Jobs criticizing the strategy behind it, but Jobs later offered to buy Palm – an indication of his continued interest in handhelds.

Add business

Others would like to see Apple push beyond its core markets of publishing, consumers and schools and into the corporate world. After all, why should those groups get the frisky new iMacs and Power Macs while corporates are stuck with boring grey boxes? A move into the business market could be a big chunk of change for Apple because most computers sold today are sold to corporations. But as recently as two years ago, Apple was reeling from an unwieldy corporate product line – which Jobs cut as he returned focus to Apple's core markets.

Other people would simply like to see lower prices. Apple's troubles a few years ago stemmed in part from its determination to keep prices high, while competing PCs became less expensive.

It's an issue Apple still faces – especially as PCs drop below £1,000, or even £500. Apple responds that its computers are simply worth more because they're faster and easier to use.

But price is an issue in at least two of Apple's markets: education and consumers. And it's unclear exactly who will buy the iBook. Though one-third of the iMac users are brand-new computer buyers, Apple is unlikely to repeat that statistic with the iBook.

After all, the market for portables geared strictly toward consumers and schools doesn't exist. But then again, that's how Apple did things in the early days, when it struck out into areas no one else had thought to pursue. Back when Jobs started the firm, there was no PC market. MW

– Lisa Bowman & Michael Fitzgerald



"We can't be arrogant again… We have to keep the pedal to the metal."

– Phil Schiller, Apple's head of product marketing

‘Broadcasting for the people’

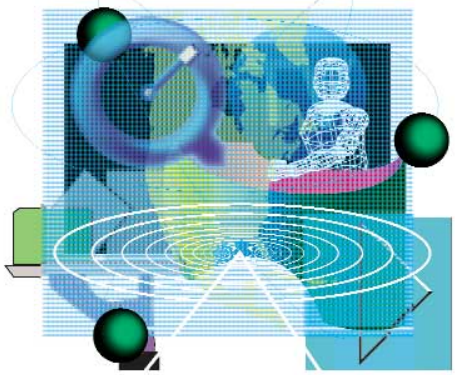
Use QuickTime TV to host your own television station on the Internet

Steve Jobs described Apple’s QuickTime multimedia technology as “incredibly strategic” as he announced QuickTime TV during his keynote at Macworld Expo in New York. QuickTime TV would “allow anyone to host their own television station”, claimed the beaming Apple CEO.

QuickTime TV is a network of Web-based video and audio content in streaming QuickTime 4 format that Jobs said he hopes will give Real Networks a run for its money. It’s the latest weapon in Apple’s plan to offer “the best experience for watching video on the Internet”.



Apple’s Phil Schiller shows off the technical merits of QuickTime TV during Steve Jobs’ keynote speech at New York’s Macworld Expo.



TV times

Jobs compared the components of the QTV network to the four parts of a broadcast television system: the receiver, the station, the broadcast network and content.

With QTV, the receiver is the QuickTime Player. The station is QuickTime Streaming Server software, which Jobs stressed was based on open protocols and open-source code, unlike Seattle-based Real Networks’ RealPlayer.

To fill in the other pieces of the broadcast model, Jobs pointed to new third-party alliances to provide content and distribution. He announced that a new partnership with Akamai Technologies, a provider of Internet content delivery networks, will supply more than 900 local servers for distributing QTV content.

Apple announced a string of partnerships, including new content providers such as ABC News, ESPN, *Rolling Stone*, VH1 and Disney. Apple vice president of worldwide product marketing, Phil Schiller, demonstrated the commercial potential of QTV, at least for the content partners. After playing a music video from the Warner Brothers Records channel, he clicked within the QuickTime Player, which directed his Web browser to a page on the WB Records site where the album could be purchased. Sources said WB will soon join the QTV alliance.

He also showed off QuickTime’s streaming capabilities by playing the preview to Steve Jobs’ other company’s new animated movie. The preview to Pixar’s *Toy Story 2* played perfectly from Disney’s Web site.

How QTV will profit Apple is less clear, according to Tim Bajarin, analyst at Creative Strategies. “QTV is just an exercise in branding,” Bajarin said. “Besides adding prominent content partners, today’s announcement represented little change for QuickTime.”

Sources said that QTV could drive sales of £20 upgrades to QuickTime 4 Pro and £349 Mac OS X Server, which includes streaming software. However, Bajarin speculated that Apple could be “playing the Microsoft trick” of selling the idea that Internet broadcasts – which, he said, will become crucial for media companies in the future – work better on the Mac.

“With increased bandwidth, streaming media and channels, this is where computers can shine,” Bajarin said. MW

– Simon Jary & Daniel Drew Turner

ILLUSTRATION BY GEORGINA WATSON
IMAGE COURTESY OF PHOTODISC (WWW.PHOTODISC.COM/UK)

IBM brings ViaVoice to the Mac



There was a big boost for voice recognition at Macworld Expo, with Apple demonstrating IBM’s ViaVoice, the first continuous-speech recognition software for the Mac. ViaVoice for Macintosh will “give users an intuitive, easy-to-use interface to perform a number of everyday computer tasks, such as creating email and editing documents”, according to representatives of the two companies.

“We are very pleased that IBM is working to bring its world-class speech-recognition software to the Macintosh platform,” said Steve Jobs, Apple’s interim CEO. “ViaVoice will enable Mac customers to interact with software applications in the most natural way possible – simply by speaking.”

“”With ViaVoice for Macintosh, consumers will benefit from IBM’s easy-to-use conversational interface and the user-friendly Macintosh platform,” said W.S. “Ozzie” Osborne, general manager of IBM Speech Systems. Another IBM employee demonstrated how users can literally talk their words into word-processing documents.

Recently named “Best Software of the Year” by the American Marketing Association, IBM’s ViaVoice technology has one of the largest recognition vocabularies on the market. It provides a hands-free interface that lets users perform functions such as creating email and editing documents. The product also integrates Apple’s text-to-speech function that lets Apple computers read text back to the user.

ViaVoice joins a growing band of voice-recognition programs moving to the Mac, following years of the platform lagging behind Windows in this area. See *Macworld*, News, July & August 1999.

The first editions of ViaVoice for Macintosh, available in US and UK English, are scheduled to be released later this year. Other languages are also planned. Pricing and additional product details will be available at product introduction, according to IBM. MW



Voodoo3 gives Mac the EvilEye

3D video accelerators port to Macintosh at PC prices



Mactell has announced the forthcoming Mac release of the Vision3D EvilEye series, a new line of video acceleration cards based on the Voodoo3 chipset developed by 3dfx. More amazing still, these cards are expected to cost about the same as their PC counterparts.

Previously, Macintosh users had expected that "generic" Voodoo3 drivers would be released without any support from 3dfx, similar to what happened recently with 3dfx Interactive's release of generic Voodoo2 drivers. Clearly, Mactell and 3dfx have different plans for the Voodoo3 market.

"We are excited that Mactell will be distributing the No.1 selling Voodoo3 products to the Mac market" said 3dfx product marketing veep Nathan Bozeman. "This agreement signals our growing commitment to deliver the 3dfx experience to 3D-starved Macintosh users."

The EvilEye cards are based on two separate Voodoo3 chipsets – the consumer-oriented 2000, and the prosumer-oriented 3500 series. Unlike 3dfx's Voodoo2 cards, the Voodoo3 cards are capable of accelerating 2D and 3D graphics, without any of the 3D performance penalties found in 3dfx's first attempt at a completely integrated 2D/3D chipset, the Voodoo Banshee.

The Voodoo3 chipset brings remarkable performance to the Mac. One of the things that makes the Voodoo3 unique is its use of a 350MHz integrated RAMDAC. A RAMDAC converts digital signals into ones that can be displayed on a monitor; a faster RAMDAC results in greater resolutions and higher refresh rates on the screen. The Voodoo3's RAMDAC is the fastest in the industry at present. The high-end 3500 card also incorporates support for true multi-texturing, which can be used by software developers to improve the quality of advance lighting, shading and special effects in 3D games.

Although the Voodoo3 chipset has some perceived weaknesses, such as lack of a 32-bit Z-buffer – which may result in lower-quality textures in some games optimized for the RAGE 128 chipset, which does incorporate such support. However, the Voodoo3 chipset and the Glide API developed by 3dfx do produce some amazing 3D effects in games. Put side by side, many gamers have preferred the graphics produced by Glide-enhanced games running on Voodoo cards than RAVE or OpenGL games running on RAGE Pro or 128-based cards.

Mactell has provided no details about the expected release date for the cards. Mactell claims its "exclusive software is designed to optimize and utilize the vast processing capabilities of the Voodoo3 graphics processors."

Mactell also indicates that the Vision3D EvilEye will support "all current 3D standards" on the Mac, including RAVE, Glide, and OpenGL.

– Peter Cohen of MacGaming.Com MW

Apple's $100m TFT-LCD screen cash

Appleis investing $100 million in Samsung Electronics to help the South Korean company's semiconductor subsidiary expand its production capacity for TFT-LCD panels, which have been in short supply since last year.

Apple is making the investment in order to ensure that there will be an adequate supply of the TFT-LCD (thin-film transistor liquid-crystal displays) for its portable products, such as the PowerBook and new iBook

"With our new iBook and fast-selling PowerBooks, Apple will need more flat displays than ever going forward," said Steve Jobs, Apple's interim CEO.

Samsung Semiconductor "would be running out of capacity without this investment," said Samsung spokesman Richard Haas.

Under the multi-year agreement, approved by the board of directors of both companies, Apple will acquire convertible bonds of Samsung Electronics – exchangeable for common stock.

At the beginning of this year, IBM invested $100 million in Samsung to help the company accelerate its delivery of Direct RDRAMs (Rambus dynamic random access memory) chips, the next-generation PC memory chips based on Rambus' high-speed interface technology. MW

www.apple.com www.samsungsemi.com

Apple keeps mum on Microsoft, OK on AOL

Apple and America Online (AOL) are developing instant messaging products for the Mac, adding a twist to the plot in the battle between AOL and Microsoft.

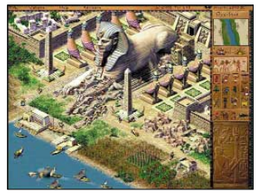
Until now, AOL has dominated the instant messaging market with its AIM service, where only members can chat to each other. Using Microsoft's own MSN service, members chat among themselves *and* with AOL users. AOL has tried to block Microsoft's software that interoperates with AIM, and each time Microsoft has released a fix, causing an impasse with some industry watchers believe will end only with a court case.

By joining forces, AOL now has Apple on its side. An Apple spokeswoman said: "Macintosh users can use AOL's instant messaging service right now. What this announcement is saying is that AOL and Apple will be enhancing that product, and creating new products in the messaging space. But we haven't defined what the scope of these products are." MW

Macs: it's game on

Game companies back the Mac









(Top) Lara lara action
In Tomb Raider III Lara Croft uses her brains as much as her brawn and butt.

(Top centre) Cleopatra, comin' at ya
When Pharoah ports to the Mac, you too can be Liz Taylor – but watch your asp…

(Bottom centre) Descent on the up
GSC's Decent 3 is sure to zap to the top of the Mac gaming charts.

(Bottom) Sea dogs
Cavedog's Total Annihilation has a wet warfare option for angry salties.

Major game companies lined up behind Apple's new consumer focus at Macworld Expo/New York '99. Steve Jobs and Bungie co-founder Jason Jones showed off the forthcoming 3D actioner, **Halo**, at the keynote (see opposite page). And a slew of new games are set to hit the shelves before Christmas.

According to show director Nicole Derany of IDG Expo Management, 16 game companies exhibited, four more than at the past two Macworld Expos. In addition, Derany said, almost every company has purchased more floor space than they have at earlier shows, selling out the gaming area of the show floor at the Jacob K. Javits Convention Center.

3DO announced a Mac version of its popular strategy game, **Heroes of Might and Magic III**, for release this autumn. 3DO originally planned a joint Expo announcement with Apple but cancelled its appearance because it is in a "quiet period" before announcing its quarterly earnings.

According to John Morris, a developer with Evolution Interactive (which is porting the game on behalf of 3DO), 3DO plans to re-engineer the Windows version of "HMM III" to allow Mac and PC gamers to compete across networks. "It says something about how important the Mac market is becoming," Morris said.

Another prodigal developer is LucasArts, which released **Star Wars: Episode I – Insider's Guide**, a behind-the-scenes look at the new movie, and showed **Star Wars: Episode I Racer**, a pod-racing simulator. LucasArts exited the Mac sphere more than a year ago, citing the platform's plunge in market share.

Sierra Studios showcased a Mac port of **Half-Life** – named "Game of the Year" by more than 40 PC publications worldwide – which will be available for Mac gamers this autumn. Half-Life is a first-person shooter action game encompassing a decommissioned missile base, top-secret project, and a portal to another dimension. Cue missiles, monsters and "the Black Mesa".



Wam! Bam! Thank you, Sierra
Actioner Half-Life is coming to a Mac near you very soon.



Good news with a twist
SimCity 3000 is still more fun when disasters, such as this tornado, wreak havoc in your urban creation.

The company also hinted that its Windows-only **Pharaoh** – a strategic city-building game set in Egypt roughly 2900 to 700 BC – might be a Mac game later this year. The object is to grow Egyptian villages into thriving metropolises, watching the economy and exotic inhabitants come to life while you flood the Nile and build Pyramids over time.

Sierra spokeswoman Genevieve Ostergard said Apple's "great support" has been as important as increased market share in convincing Sierra to increase the pace of Mac development.

Graphic Simulations demonstrated an early version of **Descent III**, a space-flight simulator. GSC is porting the game from game giant Interplay, which has produced few Mac versions of its recent titles.

On the hardware side, Mactell presented its Vision3D EvilEye 3D accelerator cards, which are based on 3dfx Interactive's Voodoo3 graphics chipset. Though no release date has been set, Mactell has said the cards will be priced close to those available now for PCs, which range from £70 to £200. See page 25 for more details.

Another Mac port on display was **SimCity 3000**, from the Maxis division of Electronic Arts (EA). The strategy game shipped for the PC in January and became the best-selling PC game in the US in February and March. The Mac version will ship in the US this summer, but UK Sim fans may have to wait a little longer.

A pouting statue of Lara Croft stood guard at Aspyr Media's booth, where **TombRaider III: The Last Revelation** was being demonstrated. The third in the series, the new version will ship for Mac in October and marks a move away from action to more puzzle-orientated play. Aspyr also won a Best of Show award from our US sister title with its **Madden 2000** American football game, ported by Westlake Interactive and released simultaneously with the PC version. Westlake's founder, Mark Adams, believes that this will open the doors for many more Mac sports games, both from Aspyr and other publishers.

iMac resurgence

Adams, who has an almost legendary status in the world of Mac gaming, made a special appearance at the show to meet fans: "After the iMac and a resurgence of interest from the consumer market, the number of Mac ports has shot up – we ported two in 1998, compared to a total of 12 in 1999, with five already shipped and another seven to come," Adams told *Macworld*.

As well as Tombraider III, the other titles to be ported by Westlake are **Total Annihalation** (a real-time strategy war game over diverse landscapes that is shipping in August), **Unreal Tournament** (arriving in October just a few weeks after the PC and Playstation versions), **Civilization: Call to Power** and **Sid Meier's Alpha Centauri** (both shipping in time for the Christmas). Alpha Centuri combines a sci-fi genre with the usual Sid Meier (originator of the wonderful Civilization) balance of exploration, discovery, building and conquest. Deer Avenger has already shipped, and **Deer Avenger 2** will appear in August.

Australian Mac man Scott Kevill was on the show floor talking up his brand-new online gaming service, GameRanger. It's the first multiplayer gaming space on the Web for Macintosh users, and it's free. Gamers can log in and play Unreal, Civilization II Gold, Quake (1,2,3, World), Railroad Tycoon II, Dark Vengeance and others with anyone else who happens to log on – and several dozen additional games will be available soon, Kevill said. In one week the site has signed up more than 2,500 registered users. MW

– Daniel Drew Turner & Louise Banbury





Halo storms Mac games wish list

During his keynote presentation at Macworld Expo, Apple iCEO Steve Jobs (and Bungie's Jason Jones) offered Mac gamers a sneak peak at what may be one of the most successful games of all time: Bungie Software's Halo (www.bungie.com), a third-person-perspective, multiplayer game that allows up to 32 players – 16 per team – to engage in vicious head-to-head battle across networks.

Halo takes place in a ring world replete with land- and water-based environments. Players have the option to join one of two races – human and alien. The two races use different weapons systems and have the ability to climb aboard distinct modes of transportation that are capable of travelling on land, water, or through the air.

Halo will feature vast, beautifully rendered environments and allow players to adopt different roles within each game. For example, you'll be able to be the driver or the gunner in a two-man assault vehicle. This ability to adopt differing roles and play in co-ordinated teams offers some enticing possibilities. If, for example, you have exceptional abilities as a gunner or driver, you'll be able to advertise your prowess on BungieNet and have other players vying for your talents in network battles.

Halo will require 3D hardware acceleration and will be available in the first half of 2000.

– Chris Breen

For the information as it happens visit Macworld Online Daily News (**www.macworld.co.uk**) updated five times a week

Expo: their finest, our favourites

Flexible upgrades, MP3 music, hybrid hardware, and wireless wonders

Once again, the editors of *Macworld* have selected the hottest new products to be introduced at Macworld Expo. The awards are open to products announced at, or shortly before, the trade show. We also had to see the products in action, although some evaluations were based on prototypes or beta versions. For the final word on these products, check out *Macworld* magazine or Macworld Online (**www.macworld.co.uk**) for authoritative reviews shortly after the products ship.

iBook/AirPort The new consumer notebook looks like another hit for Apple (**www.apple.com**; 0870 600 6010). Apple's AirPort technology brings wireless networking capabilities to the iBook at an affordable price.

Studio Artist This self-described "graphics synthesizer" from Synthetik Software (**www.synthetik.com**) offers a new metaphor for painting software. With it, you can create your own painting tools by modifying any of 200 painting parameters.

EPicture Beatware (**www.beatware.com**) makes its Mac OS debut with a Web-graphics program (see screen left) that holds it own against offerings from Adobe and Macromedia.

SkyLine Wireless Network Card This PC card from Farallon (**www.farallon.com;** Principal, 01756 704 000) brings industry-standard wireless networking capabilities to the PowerBook G3.

Rio PMP 500 RioPort (**www.rioport.com**) finally gives the Mac its due with the first Mac-compatible MP3 player.

SoundJam MP New from Casady & Greene (**www.casadyg.com**), SoundJam is the first Mac software that encodes and plays back MP3 song titles. It's bundled with the Rio PMP 500, but you can also use it without an MP3 player.



*Escient (**www.dvdchanger.com**) showed off its budget **C200 DVD jukebox** that uses a high-speed FireWire interface. It can hold 200 DVDs or CDs, and play two at a time with dual DVD-ROM drives. Aimed at the small studio the C200 uses technology usually the domain of large corporate markets. At just $1,500 it is a tenth of the price of many other competing systems.*



New Mac layer
e-Picture lets you design, create, animate and edit Web graphics with a simple point-&-click process. The program simply records the properties of each graphical element as you move it across a single layer.

LiveStage 2.0 Totally Hip Software (**www.totallyhip.com**) has spruced up its QuickTime scripting software with an improved interface and simpler scripting tools.

Microsoft Outlook Express 5.0 For more details on this product, see Microsoft story below.

Mach Carrier Upgrade This G3 accelerator (**www.xlr8.com**; ProMedia, 01923 266 400) from XLR8 makes it easy to keep current with processor upgrades by letting you replace the chip when faster versions are released.

TypeStyler III It's back! The world's easiest text manipulator is still simple and fun – and now it works its wonders for the Web, too. See Reviews, page 61, for our full evaluation.

MultiPass C635 The first multifunction peripheral for the Mac, the C635 from Canon (**www.canon.com**) combines printing, scanning, and stand-alone copying and faxing capabilities. MW

Microsoft updates Web apps

Microsoft (**www.microsoft.com**) has announced new Mac versions of its free Internet Explorer Web browser and Outlook Express email client, as well as a repackaged bundle of its Word 98 word processor targeted at iMac and iBook users. Both Internet Explorer and Outlook Express are moving to version 5.0 and will be available in the autumn, the company said.

Delivering on an earlier promise to bring its browser into compliance with Web industry standards, Internet Explorer 5.0 will support Cascading Style Sheets Levels 1 and 2, HTML 4.0 and XML, as well as Apple's Mac OS Runtime for Java 2.x and other formats and standards.

Among the new features to be included in the browser will be a new Auction Manager that opens a separate window to automatically track and help complete online auctions. The tool notifies a user when auctions are nearing completion and whether someone else has placed a higher bid.

"We asked, 'What are people doing on the Web?' and then we set out to add features that users want," said Dick Craddock, online product manager for Microsoft's Mac Business Unit.

Ben Waldman, general manager of the Mac business unit, said Microsoft had seen a decline in sales of Macintosh software through the corporate licensing channel, indicating the platform increasingly is being used at home rather than the office.



"We're seeing a strong shift to the consumer market, which has been really accelerated with the iMac," he said.

As a result of this shift, Microsoft is adding new features to its browser and mail software specifically designed to make the products easier to use, according to Waldman.

So, the new Mac Outlook Express will automatically convert attached documents to formats that can easily be read by Windows- and Unix-based computers.

The Web browser's new rendering engine will allow Macintosh users to read Web pages previously legible only when viewed on Windows-based PCs.

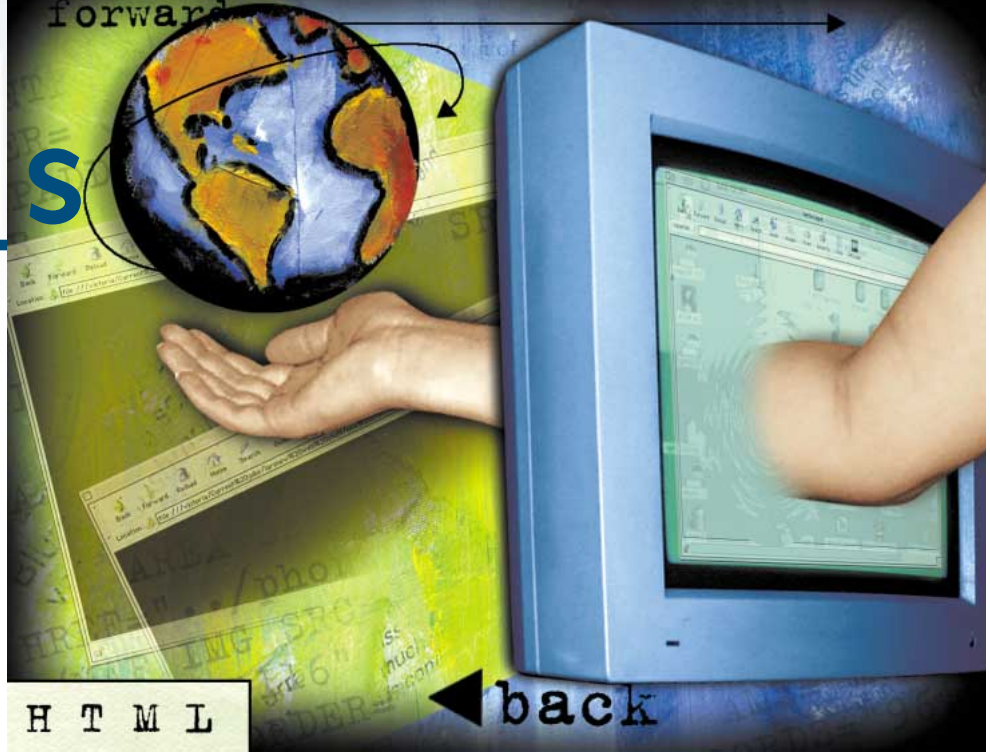
Junk punk

Other new features in the Outlook Express email software will include a Junk Mail Filter that uses a variety of methods and algorithms to scan incoming mail and determine what may be unwanted mail. Users will be able to regulate the sensitivity of the filter's junk-mail scan and determine what to do with the mail: flag it, move it to a separate folder or delete it outright.

The software will also feature an integrated address book that doubles as a full-featured contact database. Other additions let users synchronize files with a Palm handheld computer and also enlarge the type size of the mail and its directories for easier viewing.

Microsoft's new Word 98 Special Edition for the Mac will be bundled with 5,000 clip-art images, 100 greeting-card templates and Version 4.5 – not 5.0 – of Internet Explorer and Outlook Express. The product will sell for $129 and include a $30 rebate for a limited time; no UK pricing at the time of going to press. **– John Batteiger** MW

Create and modify graphics through your Web browser



LARRY GOODE

Online art power

The next time you need to touch up a photo or convert an image file, you may have an extra software tool at your disposal: your Web browser. A handful of developers, including Extensis and newcomer Avivo, have introduced Web sites that let you perform graphics operations that would otherwise be handled by stand-alone software. As Internet bandwidth increases and developers look for new sources of revenue, Web-based graphics apps could be commonplace.

Pro-tech-tion

Web sites that duplicate commercial software's features are nothing new. For example, Netstudio.com offers tools for creating simple Web graphics. However, these sites are largely geared toward casual users. The new Web application sites target graphics professionals.

Creative pros Extensis, best known as a developer of graphics plug-ins, has launched a Web site – **www.creativepro.com** – that offers discussion forums, service directories, links to industry news sources, and information about software products. The site is set up in partnership with companies like Adobe, Macromedia, Corel, Quark, and Apple.

Nothing unusual – but Extensis has ambitious plans to offer a variety of graphics services via the site, including PDF-to-HTML file conversions, digital photo enhancement, and portfolio hosting. The CheckPoint preflighting service, for example, uses Preflight Pro technology. Users simply access the site area, and drag-&-drop PDF files, either individually or in batches, onto the preflight window, and the files are then automatically checked for font and image errors.

Problems are then listed, and a comprehensive set of advice and solutions is offered. The CheckPoint service is offered only for PDF files at the moment, but Extensis hopes that the service will be soon be extended to QuarkXPress and other formats.

According to Extensis CEO Craig Barnes, country-specific sites will be a "project for the millennium".

Atomic power Avivo, a new company founded by ex-Macromedia employees, has launched a Web site – **www.atomz.com** – that will offer free software applications for Web developers. Atomz Search lets you quickly produce search engines for your Web site. Using tools on Atomz .com, you can create customized results pages that conform to your site's design.

The free Search service is limited to Web sites with fewer than 500 pages, and you must include a "Powered by Atomz.com" logo on the search page. The company offers a premium service, beginning at $30/month, for larger Web sites or those that don't want to display the logo. The premium service also provides automatic re-indexing of your site.

With the free service, you must periodically hit a re-index button. Avivo will offer other server applications, including workflow management and dynamic data/graphics generation.

Extra! Extra!

Targeting the newspaper business, B-Linked (**www.b-linked.com**) and iPrint (**www.iprint.com**) have teamed up to offer the Virtual Ad Design Studio (VADS), a service that allows advertisers to create and customize print ads using a Web browser. An advertiser takes an ad created for one newspaper, modifies the copy, fonts, graphics, and other elements, and then redistributes the ad to other publications.

Other vendors In May, Macromedia announced Shockwave.com, a new business venture that will manage an entertainment-oriented Web site of the same name. And MetaCreations offers direct links to online interest groups through menu commands in its software. For example, the BryceTalk command in Bryce 4 accesses an online forum for Bryce users.

And Adobe, as part of an ongoing restructuring, says it will beef up the electronic-commerce features on its Web site, making it easier for customers to buy the company's software – possibly via a refocussed Web portal. MW

– Stephen Beale & Louise Banbury



iMax colours

The highest-priced item for sale on the Macworld Expo show floor was an iMac painted in wild, rainbow colours by pop-art icon and Mac stalwart Peter Max (self-pictured above). New York retailer J&R Electronics had it on sale for a cool $25,000.

Formac, showing at a US Macworld Expo for the first time, showed off 3D glasses that work with its ProFormance 3 graphics accelerator to deliver eye-popping images from any standard 3D app. The glasses will cost about £30 when they ship next month. The graphics card costs from £199. **– John Batteiger**

Happy birthday, iMac!

On the anniversary of the Computer of the Decade, *Macworld* looks at the incredible impact of the iMac.

Steve Jobs celebrated the first birthday of Apple's iMac consumer PC a little early during Macworld Expo in New York. By the time that the iMac really is a year old on August 15 this year, Apple will have sold two million of the innovative home PCs, according to Apple interim CEO Jobs.

"It's less than one year old, and yet the iMac is all-pervasive in our culture", boasted Jobs, to warm applause from the Expo crowd.

"It has taken off like a rocket!" he boomed over loud applause.

He claimed that 89 per cent of all iMac users are connected to the Internet, and that a third of them are first-time computer buyers – all good news for Apple's once-beleaguered market share.

Out of the 13,000 Mac applications on show at this year's East Coast Macworld Expo, 3,935 are new or renewed programs that have shipped since the iMac's spectacular birth.

Jobs highlighted three new programs that are sure to cause a stir on their release.

First he announced that Disney would be releasing four interactive CDs to coincide with the release of Pixar's *Toy Story 2* this winter. Then he brought Jason Jones, co-founder of games giant Bungie, on stage to give the world's first showing of a totally new Sci-Fi shoot-'em-up game, Halo. The crowd whooped-up the stunning OpenGL-based 3D graphics. For more on Halo and other new games announced at Macworld Expo, see pages 26-27.

In the UK, Apple resellers and developers joined in the celebration of the iMac's birthday. It arrived in the UK on September 15 1998, with an official launch party at Apple reseller, Mygate.

Maneesh Patel, marketing director of Mygate, reflected on its first year: "It's been an incredible year, it seems like the iMac has been around for about ten years. It has revolutionized the platform, and generated interest from the press and from customers that Apple had lost."

One manufacturer to have benefited from the iMac's appeal is Entrega, one of the pioneering companies in the USB market that makes hubs, converters and cables. When it started out in 1998, the aim was to get a head start on the the PC industry's move to the USB standard, but while the PC industry stood still, Apple was the company to push the technology forward.

Paresh Patel, Entrega's Apple sales manager, said: "Apple took a bold step with the iMac, and I was surprised with its success, because of the lack of a floppy drive. But it drove the market, and other manufacturers jumped on the USB bandwagon. Entrega was in the right place at the right time, and the launch of the iMac did help. The Mac now accounts for most of our sales."

The iMac was Apple's first USB-only PC. Since August 1998, the number of USB devices has soared from just 25 to 125 – with another 125 USB products announced for shipment later this year. At Macworld Expo, 37 new USB products made their debut, and during the keynote Jobs showed off NEC's soon-to-ship portable scanner, which draws its power from the iMac via USB. He also told the expectant crowd to look out for multiple-use print/scan/fax devices from Epson and Canon (see page 28).



Nice one, son
The iMac may only be a year old, but the launch of the iBook makes the desktop consumer system the grand-daddy of all translucent, coloured computers.

Technology aside, to the consumer it was the design that made the difference, and the iMac has gone down in history as a design classic. One of the iMac's highlights was winning the British Design and Art Directive (D&AD) Gold award.

Julian Brown, a product designer and chairman of the D& AD product design award jury panel, said: "At a basic level, its popularity was down to the colour, and its translucency. It's not the first time it's been done, but it's a first for the computer world – that's the quantum leap, and accounts for its sex appeal."

Not just a looker

Brown thinks that, although the past year has seen a proliferation of "iMac-ified" translucent coloured products – and the next year might see cheaper PC imitations – the iMac was a one-off: "What made the iMac a winner was the fact that Apple have done it really well and invested an enormous amount of time and money into the design, not just by squirting on a colour, but re-engineering the whole thing.

"I think the iMac is a one-time possibility. It gave Apple the injection it needed, and is the golden egg. Translucency doesn't work on every shape, it's important to have colour and shape working in harmony with each other."

In the next year, we can expect faster iMac models, and maybe models with larger screens – the much-rumoured DVD iMac (reportedly code-named *Eight Ball*) didn't make an appearance at Expo. But the four product categories are now complete, with the launch of the iMac's portable sibling, the iBook (pictured above).

As Mygate's Patel says: "There are many in the industry who believe that Jobs has now done his job as iCEO and won't be there in six months' time. Generally, I think people in the industry are more comfortable now that the talk and the hype is over and the products are there, but we really don't know what the next year will bring."

Whatever 1999-2000 brings our way, you can be sure that Apple will be even stronger come the second anniversary of the amazing iMac. MW

– Simon Jary & Louise Banbury

iMAC PHOTOGRAPHY: MARK JOHANN

For the information as it happens visit Macworld Online Daily News (**www.macworld.co.uk**), updated five times a week

For the information as it happens visit Macworld Online Daily News (**www.macworld.co.uk**), updated five times a week

Tektronix's 'iMac' Phaser set to stun

Tektronix has given its Phaser 840 colour printer the designer treatment, with the launch of a limited-edition model that comes in an ice-blue casing to complement the blue-&-white G3 Power Macs and Apple Studio Displays.

The Designer Edition printer costs £3,995. The solid-ink technology delivers a maximum printing speed of 10ppm in full-colour, and a resolution of 1,200-x-600dpi.

As well as USB and SCSI ports, the printer has a 10/100MHz Fast Ethernet interface.

The Phaser 840 does not use complicated consumables, such as toners and cartridges, because the ColorStix ink can be added "on the fly". Tektronix also offers free black ink for the lifetime of the printer.

For overhead transparency printing, the Phaser 840 offers two modes – Standard for printing at high quality at 2.5ppm and Fast Colour for printing at 5ppm.



The Standard paper tray holds 200 sheets or 50 transparencies, and up to two optional paper trays can be added, each holding 500 sheets. 128MB of RAM and Adobe PostScript 3 come as standard.

Main feature

Other features include Automatic Duplex, Electronic Collation, and Pipelining, which allows the printer to process subsequent pages while the first page is printing.

An A3 or A4 scanner can be attached via the SCSI port for colour copying.

Tektronix, 01628 403 600

Konica packs in the pixels



Resolute
The two-million pixel Q-M200.

Konica has rolled out the Q-M200, a two-million-pixel digital camera. Priced at £453, the camera improves on the company's Q-M100, with better colour reproduction and a new high-speed shutter-release system. It is designed to be easy to use and suitable for newcomers to digital photography.

The camera features a range of shooting modes: text mode, for black-&-white images; Sports, for shooting moving objects; Infinity, for taking scenery shots; and Macro, for 10-30cm close-ups. It also has four-frame continuous shooting and digital 2x zoom and colour LCD monitor.

Shots can be customized with adjustable white balance, sharpness and saturation, and shutter speed can be adjusted to up to two seconds. Four mode-resolutions are available: superfine, fine, basic and economy.

The Q-M200 ships with a lithium battery recharger and an 8MB CompactFlash card that can hold up to 20 images in fine mode.

Konica, 0208 751 6121

Fujitsu SCSI hard disks

Fujitsu is shipping its new range of SCSI hard-disk drives, the Allegro 5 series, offering 9.1GB, 18.2GB and 36.4GB of storage capacity.



All three capacities are available with a spindle speed of 10,000rpm, and feature giant magneto-resistive technology. The 18.2GB and 9.1GB models are also available with a speed of 7,200rpm.

Internal data-transfer rate is 45MBps on the 10,000rpm models, and the drives have a seek-time of 5.0ms. As well as an ultra-2 LVD SCSI interface, the drives have Fibre Channel-Arbitrated Loop high-bandwidth interface options, and Ultra 160/m is planned for later this year.

Pricing for the drives starts at £243 for the 9.1GB and 18.2GB drives, and £975 for the 36.4GB model.

Fujitsu, 0181 606 4605

Network express

Samsung has launched the ML6100, an entry-level 12ppm networkable laser printer. Priced at £549, the printer features 12MB of memory, Local Talk and 10/100BaseT ethernet networking options, with a 600-sheet paper capacity and PostScript 2 as standard. Other options include 68MB memory upgrade, and iMac USB driver software.



Samsung, 0800 521 652

PitStop 4 ready to roll

Enfocus Software is shipping PitStop 4 for Adobe Acrobat 4.0, a PDF production-tool that combines preflight, interactive and native-PDF editing, and automated-correction capabilities. Users receive standard preflight reports, with hyperlinks back to the original document and preflight annotations indicating problem areas. Text editing can be done in complete paragraphs or line by line. PitStop 4.0 costs £199 for a single user. Existing PitStop and CheckUp users can buy an upgrade for £69.

Alta Technology, 0171 622 6606

Maxtor working hard

Maxtor has unveiled the DiamondMax Plus 6800 hard-disk drive with 27GB capacity. Priced at £349, the 7,200rpm drive features an average seek time of 9ms, an UltraDMA 66 interface and a 2MB cache, incorporating 100MHz SDRAM. It also features MaxSafe – Maxtor's data-protection package that automatically detects, isolates and repairs drive problems.

Maxtor, 00 353 1 2866 222

Techworks feeling flat

Techworks, best known for memory upgrades and 3D-graphics cards, has entered the flat-screen monitor market, with the launch of its 14-inch TFT400. It is capable of displaying resolutions up to 1,024-x-768 pixels and has an autoscanning range of 24-61KHz (horizontal) and 50-90Hz (vertical). Its controls include contrast, backlight and auto set-up.

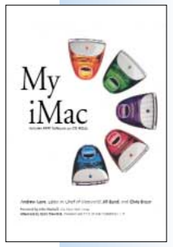


Techworks, 01753 898 500

All prices exclude VAT

CDs and books

New chapter for iMac



My iMac is one of the lead titles in IDG's latest book-release list. Written by Andrew Gore, Jill Baird and Chris Breen, *My iMac* looks at hardware set-up and support, new technology, OS operations, bundled applications and the Internet. Priced at £18.99, the book (ISBN 07645 33177) will be on the shelves in August. Other titles coming out in August are *Acrobat PDF Bible,* by Ted Padova (£36.99) and *AppleWorks 5.0 for Dummies,* by Bob LeVitus (£18.99).
Transworld Publishers, 0181 579 2652

Alright on the knight

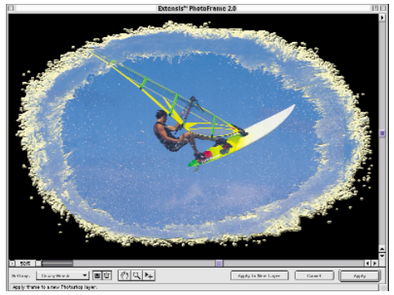


Europress has launched a new historical adventure game costing £19. Crusader is set in the late 12th Century and tells the story of Knight Arthaud, who has been set a task of recovering the true cross of the Holy Land, Jerusalem. Crusader recreates successfully the medieval world. It has 60 minutes of video, 30 hours of playing time, 32 problems to solve and 198 manoeuvres to complete. 3D-rendered graphics and backdrops form its pictorial content includes paintings, engravings and photographs from the Chateau de Versailles.
Europress, 01625 855 060

Explosion of images

Nova development has released Art Explosion for the Mac. The 23GB title is a collection of 525,000 clip-art images on 37 CD-ROMs. All the graphics are professionally illustrated, are easy to find and easy to use. Included is a 1,500-page printed catalogue, which comes complete with a Quick-Locator index.
Nova Development, 01752 202 507

Extensis is in the Frame



Frame and fortune
PhotoFrame 2.0 gives users real flexibility with effects editing.

Extensis has unveiled a new version of PhotoFrame – its Adobe Photoshop image-frames and border-effects design tool. PhotoFrame 2.0 offers designers a choice of 1,000 image-frames, or users can build their own custom-frames and edges from scratch, or by adjusting existing frames.

The company has also launched a companion Web site in partnership with Dynamic Graphics, where PhotoFrame users can download additional frames and borders. The Web site can be easily accessed from within PhotoFrame, and users can subscribe to a monthly service offering new content.

The new version of PhotoFrame has a selection of effects to add to frames and borders, such as drop-shadows, glows, bevels, textures, blur, noise, opacity and blend modes, while real-time previews and interactive controls let users design their effects visually.

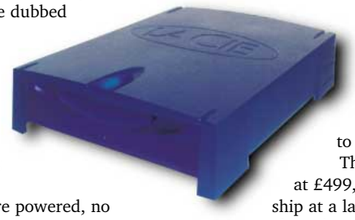
The re-vamped interface has dockable palettes, and any combination of settings can be saved and accessed from the Photoshop menu bar. Users can then apply a favourite frame without having to launch the filter.

Extensis Portfolio digital-asset browser is included with PhotoFrame, so that users can preview frames and drag them into PhotoFrame for editing.

PhotoFrame 2.0 is compatible with Photoshop 4.x, 5.0 and 5.5 and is priced at £154.
Computers Unlimited, 0181 358 5857

La Cie's FireWire family

La Cie has announced details of its FireWire product range, including hard disks, mobile drives and CD-RW, DVD-RAM and DVD-ROM drives. The mobile drives come in 4, 6, 10 and 14GB capacities and are dubbed by La Cie as the "world's smallest FireWire Hard Drives". They measure 76-x-20mm, weigh 234g and cost £369 for the 4GB model; £479 for the 6GB version; £699 for the 10GB; and £899 for the 14GB.



As the drives are FireWire powered, no external power supply is needed.

The La Cie FireWire desktop drives for G3 Power Macs ship in 10GB and 20GB capacities, and cost £320 and £420 respectively. Both drives provide throughput of 15MBps. A 36GB version will follow, with pricing yet to be confirmed.

The £349 FireWire CDRW 8220 records CD-R at 8x speed and writes and modifies CD-RW disks at double speed, according to LaCie.

The DVD-RAM drive is priced at £499, and a DVD-ROM drive will ship at a later date, with pricing to be confirmed.
La Cie, 0171 872 8000

Umax extends USB scanner range



Umax has launched the Astra 2000U, its latest USB colour flatbed-scanners. Priced at £73, the 36-bit, single-pass Astra 2000U scans up to a resolution of 600-x-1,200dpi. It features a high-quality CCD (charge couple device), as well as Umax's Bit Enhancement Technology. The model's software bundle includes VistaScan 3.5, scanning-software. It also features VistaAccess – which adds an icon to the toolbar for easy access from the desktop – and VistaShuttle, a step-by-step guide to creating greeting cards, email, wallpaper and screensavers. The bundle includes Adobe PhotoDeluxe 2.0 image-editing software, NewSoft Presto! and Caere Omnipage LE.
Umax UK, 01344 871 329

All prices exclude VAT

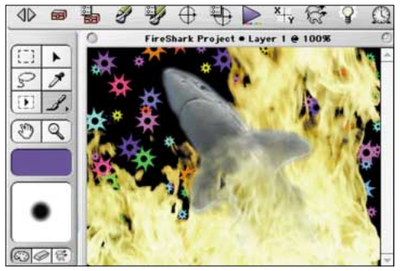
Video-editing fillip as RotoDV cuts in

Digital Origins is now shipping RotoDV, its painting and special-effects tool for video. Based on QuickTime architecture, RotoDV works alongside other popular video-editing applications, such as Digital Origin's EditDV or Adobe Premiere, or compositing applications, such as Adobe After Effects.

RotoDV can be used for animation, and special-effects and touch-ups, using unlimited numbers of non-destructive paint and video layers. Layers can be blended, but yet remain intact. The Blend Stack feature combines paint and video layers to produce complex effects. Brushes can be customized by setting and linking parameters to produce a variety of effects. Tools can take on a "natural media" feel, can apply sparkle or shimmer effects, and can paint directly into the alpha channel. Images can be cloned within a frame or from any frame in a different layer.

Realtime playback means users can view results immediately, and Frame Thumbnails show what's happening at each point in the movie.

Other features include QuickTime Effects support, multi-frame onion skinning, and frame/field support.



Close to the edit
RotoDV's unlimited and non-destructive paint and video layers allows for animation, special effects and touch-ups.

RotoDV costs £499 and ships with EditDV Unplugged – an entry-level non-linear editor, Terran Interactive's Media cleaner EZ, and a collection of royalty-free clip art.
Digital Origin, 01277 201 729

Pic and mix
Ricoh's RDC-5000 has a resolution of 2.3 million pixels.



Ricoh RDC ready

Ricoh has announced a 2.3-mega-pixel digital camera, the RDC-5000, shipping with both serial and USB interfaces. As well as its 2.3-million-pixel CCD, the camera has a 2.3x optical zoom-lens, which uses continuous focusing to deliver 200 line/mm resolution. The camera also has a 2.5x digital zoom lens. The RDC-500 offers three different JPEG compression ratios – normal, fine and economy - for each of the camera's two resolution modes.

The camera has 8MB of internal memory – with an optional 32MB SmartMedia card also available – allowing up to 399 shots to be stored.

A feature of the RDC-5000 is its LCD monitor protection – a sliding cover that automatically extends to protect the 1.8-inch LCD monitor when the camera is switched off. Software bundled with the £536 model includes ArcSoft's PhotoStudio 3.0 and ArcSoft PhotoBase.
Johnsons Photopia, 01782 753 322

ViewSonic's flat season

ViewSonic has unveiled its first 17-inch flat-screen monitor, the GF775. The £260 monitor is the first in the company's Graphic series to use PerfectFlat technology, which eliminates reflection and offers a flat, disortion-free image, says ViewSonic.

The GF775 features SuperClear screen treatment, which increases brightness and contrast in order to reduce eye strain. The monitor is also designed for easy set-up, via its digital OnView controls.



Aimed at users of graphics applications in the imaging and desktop-publishing market, the GF775 has a 0.24mm slot-pitch, 3-95KHz horizontal-scan range, flicker-free resolution of 1,280-x-1,024 pixels at 88Hz, and a resolution of 1,600-x-1,280 pixels at 75Hz.
ViewSonic, 01293 643 910

pricing update

FireDrive devices

Mactell has cut the price on its FireWire external hard drives, as well as launching three new FireWire external devices. Its FirePower FireDrive 8.4GB drive is down from £319 to £275, the 10.1GB version is £136 cheaper, at £309, and the 14.4GB model is now £379, down from £579. The new products are: a £345 4-x-4-x-6-speed CD-RW; an MO drive, costing £415; and a £579 DAT drive.
Channel Dynamics, 0870 607 0540

Adobe's bundle double

Adobe has announced two new software bundles for Web and design professionals, called the Web Collection and the Design Collection. The Web Collection comprises GoLive, Photoshop, Illustrator, and ImageStyler (for a limited period). It costs £750, a saving of £124. The Design Collection includes InDesign, Illustrator, Photoshop and Acrobat and is priced at £950 - £104 cheaper than if bought separately.
Adobe, 0181 606 4001

Tally T8000 printers

Tally is giving away a free colour scanner with its T8000 Series of A4 colour laser printers. Customers who buy a T8104 or a T8104Plus will receive an Acer Falcon Cs10P 4,800dpi colour desktop scanner, while stocks last. The T8104 costs £1,795 and the T8104Plus version is priced at £2,295. Both offer speeds of 4-8ppm colour and 16ppm for monochrome.



Tally, 0800 525 318

Extreme Upgrade

Extensis is offering Extreme Upgrade, a £299 bundle of software including the Adobe Photoshop 5.5 upgrade and four best-selling Extensis products: PhotoTools 3.0, PhotoGraphics 1.0, Intellihance Pro 4.0 and the new PhotoFrame 2.0. Individually, the products sell for a total of £460.
Computers Unlimited, 0181 358 5857

All prices exclude VAT

GCC laser joins Elite

GCC Technologies has announced the Elite 12/600 USB laser printer. It offers 12ppm printing with 600-x-600dpi resolution. It supports up to 800 sheets of paper and has a maximum printing area of 8.5-x-14 inches. With PostScript as standard, the non-networkable Elite 12/600 USB is priced at £499.
GCC, 0181 754 6001

Wacom ships USB tablet

Wacom is shipping USB versions of its Intuos graphics tablets. The models are available in sizes A6 to A3 and prices start at £135. Each tablet features tilt- and pressure-sensitivity with 1,024 pressure levels, and a resolution of 2,540dpi. The Intuos range includes six input devices – a pen, a 4D programmable mouse, a lens cursor, an airbrush, an inking pen and stroke pen.



Computers Unlimited, 0181 358 5857

Premiere free-for-all

An enhanced version of Adobe Premiere is now available free of charge to registered users. The update has enhanced DV and FireWire support, allowing customers to plug-in a DV camcorder to a FireWire-equipped G3 and edit from the desktop, without additional hardware. The update has QuickTime 4 support.
Adobe, 0181 606 4001

Marathon racks its brains

Marathon Computers has released the £249 GRack, a rack-mount solution for G3 Power Macs. The GRack is a pair of adjustable aluminium rack-mounting side panels that allows a G3 to be mounted on its side in an industry-standard 19-inch rack. Users should check that their CD-ROM player is suitable for vertical mounting.
Technical Earth, 0181 450 0303

Lindy's 'iMac' keyboad

Lindy has added to its range of Mac accessories, with a new USB keyboard. Priced at £45, the blueberry-&-white keyboard has a full-size extended layout, and has two USB ports.



Also in the range is the £17 Lindy USB mouse, a single-button model with 400dpi resolution.
Lindy, 01642 754 000

Adaptec pops-up Toast 4 Deluxe

Adaptec has announced Toast 4 Deluxe, the new version of its CD-burning software. Toast Deluxe 4, priced at £49, allows the burning of authorized MP3 files to audio CD.

Its CD Spin Doctor application lets users take old LPs, clean-up hisses and pops, add hi-fidelity, then burn to CD.

And Toast 4's Liquid Audio Music Player means that users can download encrypted music files from Liquid Audio's Web site and then burn music CDs.

Users will also have access to CDDB's online Disc Recognition Service – where artist, album and song title information is available for use – so that titles don't need to be typed in.

Toast Deluxe 4 also includes PhotoRelay, a media-cataloging application for organizing and storing digital images to CD. It provides fast access to media files archived on any storage device, and can be used to create CD digital photo or Web albums.

Available in the autumn, Toast 4 Deluxe also offers expanded drive support for USB and ATAPI CD-R/RW recorders from manufacturers such as LaCie, QPS and Freecom.
Adaptec, 01276 854 500



Flat Earth flat-out on Web

G-Media's new e-commerce site contains royalty-free images from its Flat Earth collection, covering business, industry, people, architecture, backgrounds and the environment. Downloads cost £25 for a 15MB file. G-Media, www.picture-gallery.co.uk

Fujitsu takes the A3 route

Fujitsu has entered the A3 document printer marketplace with the introduction of the PrintPartner PP20W. Priced at £1,179, the mono laser PP20W prints at 20ppm in simplex mode and 16ppm in duplex mode, at resolutions of up to 1,200-x-1,200dpi. It has LocalTalk and ethernet networking capabilities, and 8MB of RAM – expandable to 72MB. PostScript level 2 comes as standard. The printer ships with a 250-sheet paper tray and a multi-function feeder with 100-sheet capacity, with optional additional 250- or 500-sheet paper trays available.



Other options include additional 250- or 500-sheet feeder trays, Flash ROM card, memory expansion cards, bar-code card and infra-red kit.

Designed for organisations with specialist A3 printing needs and volume A4 printing requirements, the PP20W has a duty-cycle of up to 65,000 pages per month and is compliant with the Energy Star power consumption function.
Fujitsu, 0181 573 4444

Sanyo presents portable projector

Sanyo is shipping the PLCXU10, a portable LCD projector. Presentations can be downloaded from a computer, via a SmartMedia card and then projected up to 14 metres at a resolution of 1,024-x-768 pixels.

The PLCXU10 screen-size can vary from 30 to 300 inches. The machine uses Sanyo's Digital Realize Interpolation Technology to expand SVGA signals and compress SXGA. The projector is compatible with PAL, SECAM and NTSC.

The PLCXU10 is aimed at computer, corporate and sales executives, who often require lightweight portable devices for presentations.
Sanyo, 01525 280 878

All prices exclude VAT

Sony's LCD screen move

Sony has announced an 18.1-inch LCD monitor, the Multiscan CPD-L181. The TFT LCD displays resolutions up to 1,280-x-1,024 pixels, at 85Hz, with a contrast ratio of 300:1. Sony's Digital Smoothing functions ensure precise reproduction of curves and characters, and an On-Screen Display adjusts phase, pitch, contrast, brightness and colour control. The £2,095 Multiscan L181 also has a detachable stand.



Sony, 0990 424 424

MailSmith delivers

BareBones Software has released Mailsmith 1.1.4, a new version of the company's Internet email client. The release has enhancmed message-composition and -viewing environments, better scriptability, and various bug-fixes. Mailsmith now supports Open Transport and direct PPP connection management. The update is free for registered users.

Mygate, 0181 318 1802

Megapixel camera debut

Fujifilm is releasing its MX-2900 super mexapixel digital camera in the UK in August. The £699 MX-2900, which has a 2.3-megapixel CCD, was launched in the US in mid-May. It is Fujifilm's first digital camera with more than two million pixels. The camera comes with Mac-friendly serial cables.



Fujifilm, 0171 465 5745

Funnel Web updated

Active Concepts is shipping Funnel Web 3.5, an update of its Internet-analysis solution. One of its new features is a set-up wizard, that guides users through their first report, and a new log file viewer for easier Web site analysis. The new referral-filtering feature enables verification of banner click-throughs from other sites and search engines,. The Pro version costs £299, and the standard version costs £159. The update is free to registered users of Funnel Web 3.x.

Computers Unlimited, 0181 358 5857

Goods release is Epson score-draw

Epson has launched nine new products this month: five scanners, a digital camera and three projectors.

Epson's first USB digital camera, the PhotoPC 800, is priced at £367. The two-megapixel camera is a 38mm, compact camera, featuring HyPicT technology to achieve a three-megapixel, 1,984-x-1,498 resolution for 11-x-14-inch prints.



Epson has included voice-recording capabilities, so that up to ten seconds of sound can be saved in a WAV-file format with each image.

Another of its feature is time-lapse photography, at intervals of between 10 seconds to 24 hours. The camera ships with an 8MB CompactFlash card, NiMH batteries and charger. A £162 entry-level model, the PhotoPC 650, will follow in October, as well as its highest-spec model, the PhotoPC 850Z.



Epson is shipping its five new scanners: the GT-10000 and four scanners in its Perfection series. The £735 GT-10000 is a high-speed A3 colour scanner for general office requirements. It scans at 600-x-2,400dpi, with a maximum interpolated resolution of 9,600-x-9,600dpi, and features a one-touch start button and optional 10ppm automatic document-feeder. Included in the software bundle is Adobe Acrobat Reader, and Adobe PhotoDeluxe Business Edition. The first in the Perfection series of scanners is the 610, aimed at the first-time buyer.



It has a USB interface and an optical resolution of 600-x-2,300dpi. Priced at £98, the scanner is designed for ease of use and ships with home-orientated software such as Adobe PhotoDeluxe, and a simplified scanner Epson driver.

Photo Perfection

The Perfection 1200U is designed for home or office users. It features a USB interface, an optical resolution of 1,200-x-2,400dpi and a software bundle that includes Adobe PageMill,Adobe PhotoDeluxe, Epson Instant Photo Print and Presto!-PageManager. Priced at £148, the scanner has an optional film adaptor and automatic document feeder. The £197 Perfection 1200Photo model is the same as the 1200U, but has a film adaptor as standard, and includes Adobe Photoshop 5.0 Limited Edition. The £181 Perfection 1200S has increased speed due to the SCSI 2 interface.



Projecting ahead

The new projector line-up comprises the ultra-portable EMP-5550, the EMP-7350 portable/desktop model, and Epson's first installation projector, the EMP-8000.

The £2,887 portable EMP-5550 offers SVGA resolution and 850 ANSI lumens and uses a new long-life (2,000 hours) 120WQ lamp.



The EMP-7350 features 1,600 ANSI lumens and MLA technology – a tiny lens placed in front of each pixel to increase light-throughput, for brighter and more vibrant images. The price has not yet been confirmed.

Finally, the EMP-8000 ships for £7,259 and has high-aperture 1.3-inch LCD panels. Its 220W UHE lamp and 2,000ANSI lumens make it suitable for high-end graphics applications.

Epson, 0800 220 546

All prices exclude VAT



David Fanning

Ground-shaking DVD technology can be viewed as the gramophone of its age.

His master's video

DVD has taken as long to take off as CD-ROM did in the early '90s. It seems that any technology that has diverse applications struggles to grip the public's imagination. DVD-RAM, for example has fantastic archiving and backup applications, but lacks the fun of DVD-Video.

DVD-Video is great, but has few business applications – bar watching movies on a transatlantic flight. DVD-ROM has huge potential for distributing masses of data, but few applications really need it. It doesn't make economic sense.

DVD-RAM, meanwhile, is, in theory, compatible with DVD-ROM drives – but its media is in a case, rather like the early caddy-borne CD-ROMs. The case is required because DVD-RAM is a double-sided technology, so there's no safe way to put a disc on a desk.

But a new type of DVD-RAM disk – a single-sided version holding 2.3GB of data – is now available. What's special about this, is you can remove it from its case and access the disc in your DVD-ROM-equipped G3 Power Mac.

Until recently, DVD-ROM was considered an unnecessary expense, unless it could play DVD-Video. As there were few commercial DVD-ROM discs, forking out for a DVD drive that didn't play movies was daft. Even the current batch of Macs is still shipping with CD-ROM drives, except for the two DVD-Video equipped models. Once there are more DVD media in circulation, there'll be more DVD-ROM drives to read them. It's a chicken and egg situation – but a reason to buy both is just around the corner.

The product that's going to spark the clamour for DVD is DVDit!, a business-and-pleasure package from Sonic Systems that unites the disparate DVD flavours.

I predict that nothing less than this all-in-one approach will spark the DVD gold-rush and the race is just hotting up.

Sonic Systems has a history of producing DVD-Video mastering systems. Unfortunately, these systems typically start at around £30,000 – out of reach for the amateur film-maker, let alone the home enthusiast. DVDit is already available for Windows, but it should soon appear on the Mac platform. What it'll enable you to do is to produce DVD-Video movies. It does lack the finer points of DVD-Video creation; there'll be no subtitling or multiple languages. But, even as a product distilled from a much more expensive system, it'll still let you at DVD-Video technology – something that's been previously unavailable.

I'm sure I'm not the only person who has been meaning to transfer old Super 8 films of my childhood onto a more secure and longer-lasting format.

I've never seen the point of putting material onto video, as it degrades so quickly. I had considered capturing it to a QuickTime movie and committing it to CD-ROM, but that would mean small pictures and – at the time – jerky playback. I look forward to DVDit!, because it will be the ideal format for my home-movie archives.

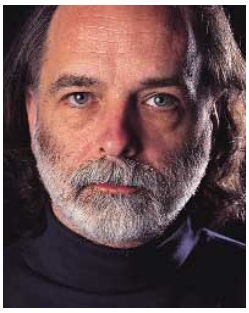
All I will need to do is drag-&-drop QuickTime or AVI files onto the application and it'll do all the tricky tweaking and encoding needed to make a DVD-Video format disc.

I know DVD isn't yet standard technology with a broad base of users, but that's just for now. In two years' time I expect most computers to have DVD-ROM drives – both Macs and PCs. I also expect to see more and more DVD players plugged into people's TVs – enough to be able to send a DVD video disc to uncle Tommy in Australia in the knowledge he'll be able to watch it.

My DVD home-movies will easily outlast the original film, won't degrade like VHS and will almost remain compatible well into the next century. Even if another format does come along, the digital nature of DVD should mean it will transfer to any new format.

But what about now? Before DVD becomes ubiquitous, millions of CD-ROM drives are in danger of going to waste. Although it's unclear how – or even if – it will work, DVDit! can, in theory, record DVD-formatted material onto any media. This means you'll be able to use a CD burner to record 15 minutes of DVD-Video. This doesn't mean that you can watch the movie on any machine, though, as DVD-Video usually needs some hardware decompression. However, it may offer a cheaper way of recording short DVD offerings to be played in DVD players. Music video-singles could be of the highest quality – and include tons of extra information.

When people began using 78 rpm records it didn't occur to them that the format would become incompatible with future formats. And, almost a century on, you can still find a way to play a 78 rpm record. At the turn of the 22nd century I expect my DVD to still be playable – just not by me. MW



Michael Prochak

BT's Multiphone promises Internet access for 'everyone' – but the truth is grimly familiar

Last among equals

I get the distinct feeling we're settling into one of those *Happy Days* kind of funks, where there's a sort of stylistic over-compensation for a lack of confidence and a general unwillingness to extend real knowledge. Ignoring the fact that 80 per cent of the world's population has never even used a telephone, let alone surfed the net or sent an email, BT recently decided to use supermodel Caprice to demonstrate how "everyone" can access the Internet 24-hour-a-day, without using a PC.

BT's new Multiphone – "the world's first public phone box to provide 24-hour Internet access-for-all" – claims that "everyone" living, working or travelling in the UK will be able to send and receive email in addition to making telephone calls. Gosh, I can hardly wait.

The first BT Multiphone was unveiled at Waterloo Station, and a further 1,000 are soon to be installed at airports, railway stations, motorway service areas and shopping centres across the UK over the next year. It looks similar to BT's existing public payphones, with the addition of a 12-inch, full-colour, touch-sensitive screen in the centre. The keypad and keyboard appear as pictures on the screen, which you touch to access services or type email messages.

The new phone boxes will also provide users with all the other usual info-crap in the form of an exclusive up-to-the-minute news, sport, travel and entertainment service. New users will be able to indulge in other exciting activities, such as setting up a free personal email address from BT's Talk 21 service, or signing up with other email providers accessible on the Internet. Web sites can be surfed on a pay-as-you-go basis using a BT Phonecard or credit card. Happy, happy, joy, joy. Despite the fact that email and Internet calls will be charged at 10p a minute and phone calls will be charged at BT's normal public payphone rates, BT's much-repeated marketing mantra maintained that much of this information will be free of charge.

Unlike the US – which actually has more computers than the rest of the world combined, and where all local phone calls are free – BT still won't be making local calls free of charge here just yet. And, unlike Apple's old "computers-for-the-rest-of-us line", when it comes to the Internet and nearly all things digital, the word "everyone" in this context, only really seems to apply if you happen to live in the West, are typically male, under 35 with a university education and high income, probably urban-based and English speaking.

Hmmm. Maybe it is like Apple's old "computers for the rest of us" line after all. Speaking of English, although it's only understood by one in ten people in the world, four-fifths of all Web sites are in English. So, you have to indulge in a cynical chuckle when at the Multiphone launch, BT wheeled out that old free-range radical MP, Ken Livingstone, to proclaim that the services offered by the Multiphone will help break down all those nasty elitist and social barriers that the information society has started to build-up. According to Our Ken, technology has brought huge benefits to businesses and individuals in the UK, but these opportunities have not been open to "everyone".

"Students with access to a computer and the Internet at home or at school or college have a distinct advantage over those that do not," gushed Ken. He added: "With 24-hour public access, every student will benefit from this global information source. Corporate UK has a social and economic responsibility to prepare our future workforce, and it appears that BT is taking its responsibility seriously."

Come on, Ken. The only thing BT is taking seriously is its capacity to generate more income and corporate profits, by creating a solution looking for a problem and marketing it as them taking its social responsibility seriously. All this corporate-speak about "supply-side" and "trickle-down" doesn't work in cyberspace because real-life cyberspace doesn't even permeate the whole infrastructue of all wired western countries. And it hardly touches most of the rest of the world. You've got to have a rather twisted take on the term "everyone" when, in reality, industrialized countries with only 15 per cent of the world's population contain 88 per cent of all Internet users. In South Asia – home to more than a fifth of the world's population – less than 1 per cent use the Internet.

Don't get me wrong. I think information for everyone is a good idea. But at the moment, that's really all it is.

Talking the talk about what's going to benefit "everyone" is cheap and easy. Walking the walk is far more difficult, and certainly makes exploitation more difficult to conceal. As far as I can tell, for the moment, most people are just talking – which BT tells us is good.

Somewhere behind the notion of "everyone", I keep hearing that line from George Orwell's *Animal Farm*: "All animals are equal, but some animals are more equal than others." MW

Apple and Microsoft 'borrow' OS ideas freely

Desktop critic

DAVID POGUE is the author of *iMac for Dummies* (IDG Books Worldwide, 1998) and the *Great Macintosh Easter Egg Hunt* (Berkely Books 1998). He also wrote *Macs for Dummies,* fifth edition, updated for Mac OS 8, *The Weird Wide Web* (IDG Books Worldwide, 1997) and *The Microsloth Joke Book* (Berkeley, 1997).

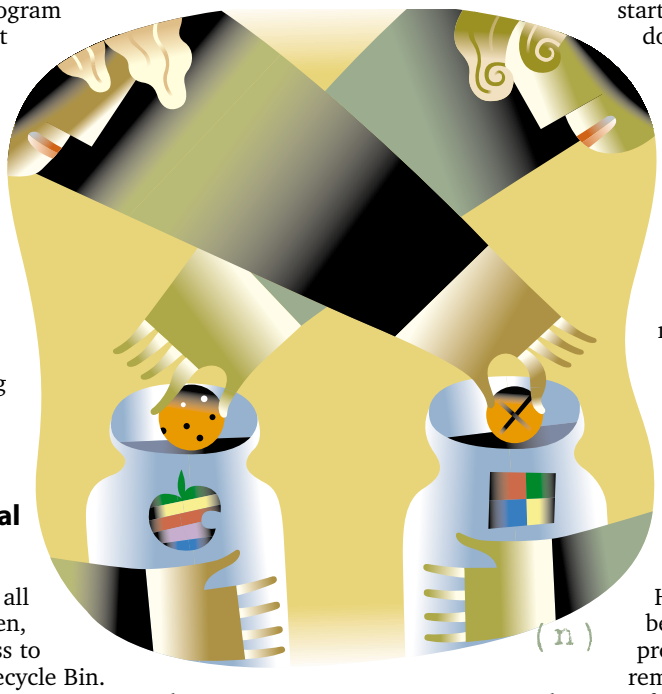
As thick as thieves

Sooner or later, Steve Jobs and Bill Gates will be hauled into that big principal's office in the sky. "You've been bad boys," Saint Peter will boom. "Haven't you ever heard that thou shalt not steal look-and-feel?" Steve will shuffle his feet and point accusingly at Bill. "He started it!"

He'll be right: for years, Microsoft Windows engineers have shamelessly ripped off Apple's best design ideas.

But after lawsuits proved to be futile, Apple began helping itself to a few features of its own. Mac OS 8.5, for example, could almost be Windows 98's better-looking brother: the Favourites menu, draggable window edges, proportional scroll boxes, the little arrow "badge" on an alias icon, program switching via ⌘-tab, daylight saving time self-correction, and the Network Browser all debuted in Windows.

Now Apple and Microsoft are both gearing up for massive OS overhauls: Mac OS X and Windows 2000. In the interest of better computing for all, I wholeheartedly applaud their duelling intellectual-property raids. Here's what's worth pilfering from each company's rival OS – that hasn't already been stolen.



What Apple should steal

In Windows, you can press Windows key-M to jump to the desktop. All windows in all programs are instantly hidden, giving you uncluttered access to your icons, disks, and the Recycle Bin. Wouldn't that be nice? Furthermore, in Windows, you can assign a keystroke to any alias; you don't have to buy QuicKeys just to get program launching from the keyboard. The Calculator – the Mac's handy, but antediluvian desk accessory – hasn't changed since Reagan was president.

The Windows calculator has bigger buttons, memory functions, a clear-error key, and a complete HP scientific-calculator mode.

The Windows Start menu is an obvious rip-off of our Apple menu – and now it's payback time. Apple should add a Programs menu item, like the one in the Start menu, to the Apple menu. It lists every program on your hard drive, which saves everyone, novices and experts alike, infinite window burrowing.

In Windows, little underlines tell you what keystrokes activate menu commands, check boxes, and radio buttons. Apple has always resisted giving us such total keyboard control. But now that large numbers of Mac buyers are refugees from Windows, it's time to reconsider. If Apple's worried about cluttering up the screen, it should do what Claris used to do: make the little underlines appear only when you're pressing the ⌘ key.)

What Microsoft should steal

Windows desperately needs a title-bar doodad, like the Mac's zoom box, that resizes windows so they're exactly large enough to contain the icons within them. Windows PCs don't come with a system-software start-up CD-ROM like every Mac does; older models can't even boot from a CD. If your Windows folder gets corrupted, get ready for three hours on the phone with a tech-support rep. Despite the fact that Windows 98 is supposed to be able to handle file names up to 255 characters long, the vast majority of files provided by Microsoft itself still have stupid names like F_WINIT. DLL.

For heaven's sake, Microsoft: you've got the space, now give self-explanatory names to your own files, as Apple does. Or come up with an equivalent to the Mac's Extensions Manager, to help us figure out what all this lint is.

AppleScript. Enough said.

Hard though it may be to believe, when you quit a Windows program, some of its windows may remain open, stranded on your screen – a complication of Windows' window-centric approach. The Mac's application orientation is much the better of the two.

Finally, despite all its recent talk about simplicity, Microsoft still believes that what makes a better Windows is more features. The Microsoft credo, "If you upgrade it, they will come," only aggravates the worst aspects of Windows – bloat and complexity. On the other hand, it's been years since Apple foisted useless, porcine features on us (remember OpenDoc and PowerTalk?).

These days, the Mac's designers consider new OS features much more carefully, weighing how each will affect the whole. When it comes to enhancing system software, Microsoft is still years away from stealing – or even noticing – Apple's crown jewel: knowing when to stop. MW

JEFF NEUMANN

reviews

MACWORLD RATING	**★★★★★/9.0-10.0 = EXCELLENT**	**★★★★/7.0-8.9 = VERY GOOD**	**★★★/5.0-6.9 = GOOD**
	★★/3.0-4.9 = AVERAGE	**★/0-2.9 = POOR**	
MACWORLD POLICY	**At Macworld, we don't think our readers should have to worry about whether ratings are based on a real product or a prototype. Therefore, we simply don't rate products unless they are real, shipping versions – the products we rate and review are the same products you end up buying.**		
MACWORLD JACKPOT	**The Macworld Jackpot gives you the opportunity to win some of the products we review. Simply dial the number indicated on participating reviews. Calls cost 60 pence per minute. Winners are selected by computer the day after the closing date.**		

3D modelling package

Poser 4.0

Publisher: MetaCreations
www.metacreations.com
Distributor: Computers Unlimited (0181 358 5857)
Pros: Improved clothing and lighting; new sketch design feature.
Cons: Inverse Kinematics implementation is inconsistent; huge memory requirements.
Price: £199; upgrade £84.99.
Star Rating: ★★★★/7.6



Running costs
Poser, with its sleek user interface and complex geometries, eats memory.

Poser is now on version 4, so it's probably at the stage where you either know you don't need it, or else can't do without it. For those in the latter category, version 4 offers a number of enhancements that will make it a welcome upgrade. For those in the former category, maybe there's something here that will make Poser worth a second look. If you ever need to produce images, models or animations of human figures – or animals – then Poser is for you.

Because it's a dedicated figure-modelling tool, it offers features for modelling and posing humans beyond that of most 3D modelling tools. You'd need to be looking at specialist software running on SGI machines, or maybe 3D Character Studio for 3D Studio Max on the PC, to get anything similar to the functionality of Poser. The good news is that Poser is available on the Mac, and at a great price.

Version 4 is not as huge a leap in features and functionality as was the quantum step from version 2 to 3. While version 3 offered a whole new user interface, a much more detailed human model, clothing tools, and a walk designer, version 4 is more a series of refinements to the basic building blocks from version 3.

Clothing is perhaps the biggest advance in Poser 4. Clothes are effectively separate figures, which are 'conformed' to the pose of the main figure. Supplied with the program is a range of both men's and women's clothing, but creating your own clothing is limited to using complex texture maps, as in Poser 3, or subsequent work in something like Painter3D.

Lighting tools are another improved area, with the ability to add an infinite number of lights, whether spotlights or global sources.

Two new windows offer enhanced functionality. The Hierarchy Editor shows clearly the relation between objects in the scene – not only figures but also lighting, props and cameras – giving a greater degree of control, especially when you're working with a number of figures. However, there are still difficulties in getting Inverse Kinematics – the system of insuring proper jointing and limb movements – to work within the limits of human movement. It's all too easy to distort a figure into an impossible pose beyond the reach of even the most supple contortionist.

The Sketch Designer offers a way of exporting still images of the current camera view in a number of artistic styles – from soft pencil cross-hatching, to screaming psychedelic acid-flashbacks. The Walk Designer has been tweaked slightly, but remains as hilarious as ever, as a means of animating steps the Ministry of Silly Walks could only dream of.

Three new rendering styles complement the existing nine – so that, as well as the default texture-shaded style, there are various wireframe and mesh-shading options, flat shading and cartoon styles. Using these styles and the Sketch Designer makes Poser a powerful graphics tool – the ideal accompaniment to stock images, scanned figures or model photography.

After Poser 3 introduced animals such as dogs and horses, I was expecting a veritable menagerie of creatures to appear in version 4. Yet the new creatures are restrained to a variety of quadrupeds, such as lions and wolves, as well as frogs, snakes, dolphins and fish. Plus a dinosaur, and a bunch of robots.

Poser 4 compliments the rest of the MetaCreations range very well, with the ability to export as a MetaStream file, and the integration with Ray Dream Studio, Painter 3D and Bryce 4 is excellent.

Not so hot is Posers' hungry memory demands and sluggish operation – its recommended memory requirement is 64MB, and it struggled on my 233MHZ G3. The default installation also took up 444MB of hard disk space, most of this was for the geometries need to construct figures.

Macworld's buying advice

Poser represents an easy and powerful way of creating and posing figures, but it does require a powerful Mac, and a fair investment in time if it is to become more than a toy. Only then will you be able to create natural looking figures, and have a great tool for creating them at a fraction of the cost of hiring models. **Martin Gittins**

Unique audio plug-ins bundle

Waves Pro FX Bundle

Manufacturer: Waves **www.waves.com**
Distributor: SVC (0171 923 1892)
Pros: This bundle provides all the popular pitchshifting, modulation and delay effects you could want for Pro Tools TDM, Digital Performer MAS and Cubase VST- compatible software.
Cons: Levels need careful setting to avoid clipping.
Price: £297
Star Rating: ★★★★/7.5



Mod for rockers
MondoMod combines Amplitude Modulation, Frequency Modulation and panning.

Pro-FX, the latest bundle of audio plug-ins from Waves, includes UltraPitch for corrected pitchshifting of formants – a frequency range that gives a sound it's own special quality; MetaFlanger for vintage flanging effects; SuperTap, a six-voice multitap delay; and MondoMod, which combines Amplitude Modulation, Frequency Modulation and panning in one plug-in. All feature the sexiest user-interfaces yet from this highly innovative company.

UltraPitch processes monophonic tracks, such as vocals or single-note instruments, to create up to six new 'voices' and does the pitchshifting with formant-correction to avoid 'chipmunk' effects. You can produce extremely realistic effects using the variable stereo-panning and delay on each output, to create huge and thick stereo chorusing, doubling, parallel harmonies and lots more.

Formant-correction keeps the sound natural when you shift the pitch, and menu options are provided which optimize this for voice, brass, strings and so forth. UltraPitch will also perform formant-corrected time stretching, where the audio is made to play back in a shorter or longer time. You can also enter negative or positive values for the formant correction, which will cause the apparent gender of a voice to change for a more masculine or more feminine effect.

For a more creative effect you can mix in three- or six-voice harmonies of the original notes and pan these across the stereo field, while randomly varying the timing between the voices, to create stunningly realistic choral effects.

MondoMod combines Amplitude Modulation, Frequency Modulation and panning. Amplitude Modulation produces the classic electronic tremolo effect, using an LFO (low frequency oscillator) to cyclically vary the loudness of the audio up and down from the normal level by a smaller or greater amount. Frequency modulation uses the LFO to vary the pitch of the audio up and down to create the classic electronic vibrato effect.

Combining these provides a more natural vibrato, which corresponds better with the way many real instruments produce vibrato – with both pitch and loudness variations. The Rotation section makes the sound pan cyclically from right to left speaker and back at a rate set by the LFO – which greatly enhances the vibrato effect. Interesting factory pre-sets include Seasick and Perfectly Awful.

Angelic chorus

MetaFlanger lets you create gentle choruses, sharp phaser-effects and a variety of flanging sounds. The default settings produce a basic flanging effect that you tweak to suit your purpose. You can preview the results using the button provided, or by playing back the audio with the effect inserted in the case of the TDM, MAS or VST versions.

The LFO varies the delay time of the 'wet' audio, which, when rejoined with the original audio, produces a huge and creative variety of effects and pleasant harmonic shifts. Variations in the delay time cause the 'swooshing' effect typical of flanging, phasing and chorusing effects. For chorusing effects, the rate and depth settings are lower than those for flanging and you keep the mix low with the delay high. For phaser effects, the delay setting needs to be low, and the mix and feedback phase inverse switches also need to be on.

SuperTap is a multi-tap delay with up to six voices, each with its own filter and up to six seconds of 24-bit delay. A multitap delay has multiple outputs or taps that produce a set of delayed versions of the original signal, which are all mixed with the original signal at the output. Feedback can be used to route audio back to the input for looping and complex rhythmic effects. SuperTap can produce a broad range of multitap delay effects, including analogue and tape delay emulation.

Basically, there are two types of processing: either with modulation or with longer delay taps. You can also choose between two or six taps for either type, and it works in mono or stereo. The stereo versions feature a Pan Graph, which contains draggable markers to change Gain and stereo position simultaneously. Separate Gain and Rotation controls are also provided for each tap. Other controls are provided for EQ/filtering, feedback and modulation, and SuperTap has the most musical interface for setting a rhythm I've ever seen.

Macworld's buying advice

The Pro-FX bundle includes the best set of pitchshifting, delay and modulation effects I have come across as plug-ins. Although many of these effects are available seperately, Waves Pro brings them together in one unbeatable bundle of tools. **Mike Collins**

Empire-building stratergy game

Age of Empires

Publisher: MacSoft
www.wizworks.com/macsoft
Distributor: Softline (01372 726 333)
Pros: Fantastic graphics; involving gameplay.
Cons: Limit of 50 units; Greeks always kick my butt.
Price: £34
Star Rating: ★★★★/8.2



Battle stations
A beach landing, followed by a bloody battle, leaves the bodies and amour of dead soldiers strewn across the killing fields.

Your Minoan advisor says: "Learn well, young king, for these are dangerous times. The blood cry of battle may call to you, siren-like, across the years, but you must guide and govern your people with wisdom befit of this age of empires."

"Yeah? Well sod that, I'm off with a kickin' army of catapults, battle elephants and war ships to teach those son-of-a-Horus Egyptians that houses have vertical walls. You can stay here and develop irrigation, 'til the cows come home. As soon as you've invented farming, that is," you spit back.

Peaceniks taste cold steel

You see, Age of Empires is like that – it'll have you nurturing embryonic civilizations, dashing breakneck through scientific development, and then use any inventions to spread peaceful messages of universal love. Either that, or you'll march straight in on a tide of chariots and introduce rival empires to the wondrous invention of tempered steel.

Age of Empires is a heady brew of two strategy favourites: Civilization II, with its almost fanatical approach to discovering techno- and sociological advances and applying them to your society; and real-time battle games, such as StarCraft. Taking up the reigns, as soon as you've built a stable, of one of 12 fledgling empires – from Egyptian and Greek, to bottom -of-the-league Choson – you have to guide it through a multitude of campaigns, including battles, land grabs, monument building, and city building.

Graphically, it can be breathtaking. Using an isometric 3D view, your villagers wander around the map, hunting game, fishing, building huts and ploughing farms – all in such detail that sometimes it's all you can do not to simply give the mouse a rest, sit back and take in this mini-world. The buildings are immaculately modelled, and whales even surface, spouting water over your fishing fleet – all lending Age of Empires a feeling of life.

And it's life you'll need to take, too. By building different structures, you can research more sinister developments: catapults, archers and armour. Next, build an army and trundle off into battle with a rival empire, marvelling at how attention to detail extends even to battle scenes. The catapults recoil after ejecting their load of rock-balls, which sail in a graceful arc before smashing into the defender's city walls.

The graphics are more than matched by the music – a melody of tribal drums, panpipe music and full-on orchestra that adds much to the atmosphere.

There's also a lot of game here. Not only are the single-player campaigns large, but there's a very comprehensive map editor so you can roll your own. Also, up to eight players – Mac only, you can't play against the evil Wintel empire – can battle it out over a TCP/IP or LAN network.

However, it isn't all good news – and both StarCraft and Civilization II still rule the roost. While the graphics are hot, there's little variation, keeping it strictly to grass plains and sandy deserts.

Also, the video cut-scenes are poor quality, and there's a bunch of annoying things, such as the inability to queue the development of warriors, for example, meaning you have to build one, then wait, then manually build the next, and so on. But perhaps the biggest, single failing is that you are limited to just 50 units – leading to some decidedly unepic battles.

Macworld's buying advice

Age of Empires is a riot, and while you may end up a bit frustrated over some of its shortcomings, this really is a game for those that don't just want a ten-minute gaming fix. You can spend hours on one campaign. It's the most fun I've had with catapults since I was a boy. **Matthew Bath**



Win

... One of 5 copies of Age of Empires with Macworld Jackpot. Ring 0900 1010 260 before 30/9/99. Calls cost 60 pence per minute.



Command and conquer
As your army explores new terrain, they can ransack any defenceless villages they come across.

Realistic flying sim

Falcon 4.0

Publisher: MacSoft
www.wizardworks.com/macsoft
Distributor: Softline (01372 726333)
Pros: Unbelievably realistic; superb graphics; loads of tutorials.
Cons: Serious hardware requirements; very tough to learn; is this really a game?
Price: £34
Star Rating: ★★★★/8.8



Mig my day
With one less MiG to trouble you, take some time to marvel at the RAVE-rendered terrain below.

Westlake Interactive is one very busy team. Not content with bringing Unreal and the various incarnations of Tomb Raider to the Mac, it has now ported Falcon 4.0 from the PC. To say this game is long-awaited is an understatement – it had a four-year development cycle at MicroProse.

The story-line is pretty standard: the North Korean army is on the move, and the allied forces have engaged them in battle. But before you can even consider playing one of the three scenarios, you have to put in some serious hours behind your screen, for Falcon 4.0 is the most intricate flight sim ever to grace the Mac. The attention to detail is amazing, as is the realism – apparently, feedback from a group of F-16 pilots went into improving the gameplay. Falcon 4.0 exudes quality, from the packaging through to the 576-page main manual, smaller beginner's guide, large wall map, laminated keyboard layout – and a stonking start-up movie – that leaves you quite breathless.

While there are eight different game options, Instant Action allows you to get straight into the killing zone. Starting out at a level flying height – avoiding the hard stuff of taking off – you can take on a swarm of MiGs in 'Fighter Sweep' or take out a bunch of tanks in 'Moving Mud'. Both are a doddle – as long as you have invulnerability turned on – otherwise the brown stuff hits the fan.

Instant pleasure

After a little instant gratification, it's down to the hard slog of going through the manual's 31 tutorial missions. Depending on how important the little things in life are – such as sleep, food and your family – this will take between a couple of days and a week. After that, you're a Falcon 4.0 junkie, ready to take on anything the enemy can throw at you – from a head-to-head dogfight through to a full campaign.

Macworld's buying advice

Falcon 4.0 is the crême-de-la-crême of flight battle sims, and a worthy successor to the likes of F/A-18 Korea and A-10 Cuba. It's very tough to learn, but rewarding none-the-less.

The hardware requirements are stiff, too. While Falcon 4.0 will function on a high-end Performa with a joystick, it really needs a G3 with an ATI Rage 128 graphics card, 128MB of RAM and a spare 600MB of hard disk space. ATI Rage Pro cards – such as the XClaim 3D – are supported, but need OpenGL to be installed plus the latest Falcon 4.0 updater.

With FLY! and Fighter Squadron on the horizon, the Mac flight-sim market has never been more buoyant. But Falcon 4.0 will take some beating – if you have the time, patience and inclination to learn it properly. **Vic Lennard**

Not-so Shagadelic trivia game

Austin Powers Operation:Trivia

Publisher: Sierra
www.sierra-online.co.uk
Distributor: Softline (01372 726 333)
Pros: Sixties graphics and sound track; all the catchphrases from the film; you can play for the dark side.
Cons: Repetitive; the questions aren't customized for the UK; the interludes and game instructions become increasingly annoying.
Price: £20.50
Star Rating: ★★/4.9

Where there's a blockbuster film, a computer game spin-off is never far behind, and *Austin Powers: The spy who shagged me* is no exception. And, in the finest tradition of film spin-offs, it doesn't live up to its original.

All the shagadelic essentials are there – the catch phrases and the time-warp sex puns – but beyond this, it appears that little thought went into the game.

The plot is suitably ludicrous: Dr Evil has kidnapped our hero, and his life – and the fate of the world – rests on the outcome of a game show, held at the Electric Psychedelic Pussycat Swingers Club.

Sierra has succeeded in making the game groovier than the average pub quiz, but there's no depth – not enough questions and too few rounds. Also, the interludes between rounds becomes tedious. The cheesy graphics and throwback music are mildly amusing – but not for long.

One major problem for Powers fans in the UK is the questions are US-oriented and haven't been changed for the British gamer.



Nooo, baby
Operation:Trivia is only for the die hard fan.

Macworld's buying advice

If you're a big Powers fan, the feel of the game will probably be enough. For the rest of us, as the trailer goes, if you buy only two games this year, don't make either of them this one. **Woody Phillips**

Account for your business

MYOB 7.5

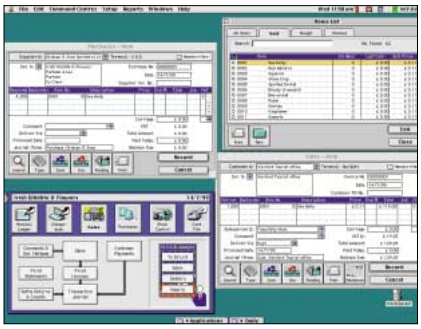
Distributor: MYOB UK (01752 201 901)
Pros: Same old feel; Apple Script-ability; improved report production; small memory requirement.
Cons: Same old feel; poor documentation; no multi-user facility; single currency.
Price: £195.
Star Rating: ★★★★/8.8

Possibly the most ubiquitous book-keeping application on the Macintosh, MYOB, has reached version 7.5. Features include AppleScript support, the option to save reports to HTML, a data-verification feature, an auto-save facility and some improvements to report writing and customised forms.

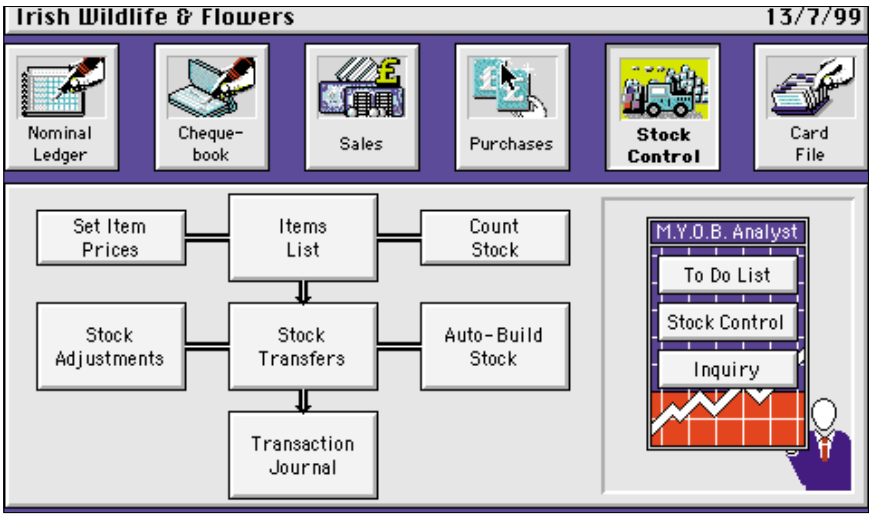
MYOB remains the best book-keeping program on the Mac. Despite its ability to carry out complex double-accounting capabilities in the background, its well-iconized methodology requires only single entry input to use – giving the best of both worlds. The cost of this ease is a complex set-up procedure, but this is simplified by a number of pre-written business templates and a nationwide network of MYOB-compliant consultants to help complete beginners with the initial set up. The tutorials are well thought out, and the intelligent online help system is extensive.

The seamless integration of the inventory system and stock-building facilities with the bookkeeping elements is the best on any application on any platform. The Job Costing feature makes cost-centre accounting possible and a to-do list gives an up-to-the minute break down of current debtors, creditors, expiring discounts, shortages of stock, pending sales and purchases, and people to contact. There are also a number of letter templates in text and MS Word format ready for mail merges.

Examining data entered into MYOB is very simple, and hundreds of reports can be produced to give a clear indication of a business's position. For on-screen querying, the application allows companies to mine into the depths of the program, to find individual transactions and contact records.



Keep on track
MYOB lets you record all your company's dealings.



Meaning business
MYOB keeps track of everything, from what needs to be done, to stock control and inquiries.

The 7.5 upgrade from MYOB UK (formerly Best!Ware) has a familiar ring to it and it looks and feels like every version before it – which is good or bad, depending on your viewpoint. The changes lie under the bonnet and are mainly concerned with the minutie of reports and forms production.

The one major introduction in 7.5 is the ability to work with other applications through the introduction of AppleScript support. It is now possible to automate the import and export of customer, supplier and transaction information. For instance, the import routine for point-of-sale transactions can be automated to update MYOB's nominal journal, which simplifies the process. AppleScripts can also transfer information from MYOB 7.5 to other applications, such as statistic and spreadsheet programs, for better management and marketing.

Bank on it

In previous versions, users were unable to match the dates on the bank's statement when trying to reconcile a bank account. This made it difficult to compare statements from the bank with MYOB-produced reports. This has been fixed now, so users can specify start and close dates to match the statement. This ability to specify both a beginning- and an ending- date range gives greater flexibility when printing reports and statements.

Another failing corrected by version 7.5 was the inability to personalize more than one kind of form, such as an invoice, shipping label, or a purchase order. This was irritating when you needed a service invoice one moment and an itemized invoice the next. It is now possible to customize as many as you want. MYOB also introduces the ability to search by supplier invoice or customer-purchase order number, the ability to have multiple customized forms and new VAT reports.

Many accountants use different accounting software, and so the introduction of a means of sending data to the company's accountant is welcome. A new feature, AccountantLink, lets users export data to CaseWare, a popular program with many accountants. Reports can also now be viewed through browsers on the Web with the ability to save reports in HTML.

On the security side, version 7.5 brings two new features: a handy AutoSave feature, that saves after a specified time has passed; and a data-verification feature, that can catch minor inconsistencies in your company's data file, before they cause serious problems.

As one of the two main accountancy programs on the Mac – Quicken being the other – AppleScript support is long overdue. The ability to exchange data with other applications brings extra power to the analysis of figures, and exporting MYOB data to a statistical application like DataDesk can produce a reliable picture of a company's position.

One of the main failings of MYOB is its inability to handle other currencies, since all foreign transactions must be converted to sterling before being entered.

Also, the documentation is a little shabby; the manuals appear to be Windows oriented and haven't been updated since version 6, although an addendum for version 7.5 is enclosed. Finally, MYOB still only offers a multi-user version for the Windows version.

Macworld's buying advice

The program remains as rugged as a program gets – it's the only application I've never had a crash with – and it remains as simple to use as ever.

MYOB fits with small and medium size businesses very well and this upgrade will particularly suit businesses with a high level of transactions. Otherwise wait for the multi-currency version later this year.
Mark Selway

Automate your pre-press workflow



MarkzScout

Publisher: Markzware
www.markzware.com
Distributor: Softline (01372 726 333)
Pros: Automates the checking of pre-production files and correcting of errors; object-oriented flowchart design; supports most standard pre-press applications and file types; large pre-configured library included.
Cons: Complex to use fully; priced out of the range of small companies.
Price: £495
Star Rating: ★★★★/8.4

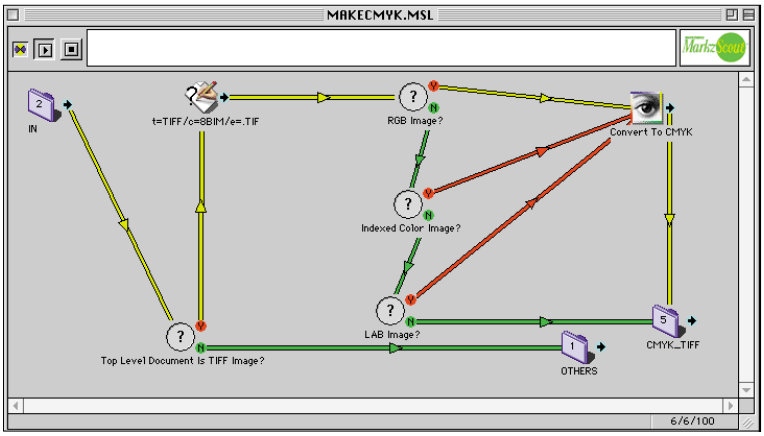
On the production side of a magazine, there is always an uneasy tension between art directors and production editors: the first make the pages look good, the latter make them work technically.

For instance, there is little point having a fabulous Photoshop-created graphic if it is left in RGB mode, and ends up being printed in greyscale! QuarkXPress's Collect for Output facility will not pick up such problems in EPS files, and while the various preflighting programs alert you to such anomalies, they don't correct them – until MarkzScout.

Single engine

Using its proprietary MarkzONE engine, Markzware has built on the reputation and experience gained through FlightCheck to create a program that can inspect files, subject them to relevant criteria and route them through a workflow system.

MarkzScout uses an object-oriented flowchart, termed a 'layout', with checkpoints that query aspects of a file to decide which of two paths it will follow, and actionpoints, where data is changed according to a 'rule'. In terms of input and output, MarkzScout uses 'hot' folders – mirror images of actual folders residing on your hard disk. For instance, image files provided by some clients may be in JPEG format – a simple layout with an input folder and a single checkpoint will weed these out and place them in an output folder.



Go with the flow
An input folder of images is being checked. TIFFs are converted to CMYK in Photoshop iand saved to the CMYK TIFF folder.

The extra step

Taking this a step further, MarkzScout can link into the actions side of Photoshop 5. So, the checkpoint above could send all JPEG images to Photoshop, convert them into EPS or TIFF files and then place them in the output folder along with all non-JPEG files that were sent there directly.

The various arrowed paths are colour-coded – blue from an input hot folder, red and green for 'yes' and 'no' from checkpoints, and so on. When a layout is run, a file's path is tracked by turning each path yellow in colour .

Most native pre-press applications are supported, including XPress, PageMaker, FreeHand and Illustrator, along with numerous file formats – including TIFF, EPS, PDF and HTML. Additionally, FlightCheck can be plumbed into the system.

Macworld's buying advice

MarkzScout is a very powerful tool – and complex to use if you need to create rules from scratch. Fortunately, it comes preconfigured with a library of some 300 rules, layouts and scripts that cover most eventualities, with more to follow on the Markzware Web site. It's certainly not a cheap option, and, as such, is likely to appeal only to larger institutions at present. But anyone controlling a busy production environment would be well advised to investigate MarkzScout – and there's a 14-day full trial with a 145-page tutorial on this month's CD. **Vic Lennard**

Excel-lent database plug-in



Vizion

Distributor: Longman Software (01223 425 558)
www.lsp.com
Pros: Simple, efficient tool for data visualization; fast performance on large data sets.
Cons: Needs more sample files.
Price: £79.
Star Rating: ★★★★/8.1

Microsoft Excel's tools for exploratory data-analysis are meagre. The developer of Data Desk, a long-time Mac-statistics favourite, has come up with a simple solution to Excel's shortcomings: add commands that allow access to Data Desk from within Excel. Data Description's Vizion 1.0 aims to give a quick way to analyze the data stored in piles of accumulated spreadsheets – and, surprisingly, it succeeds.

It's surprising because programs often make mining more trouble than it's worth. Vizion gives you just three Excel menu items; pick one and tell Vizion where to find the data to use, and you instantly pop into an environment that performs most kinds of analysis, with simple graphics and hand-holding for all program functions.

To start an analysis, you select some data columns in your Excel spreadsheet, pick the corresponding item from the Vizion menu in the Excel menu bar, and then you are transported to a Vizion page, where you'll find every useful graphical analysis of your data. You don't have to pick and choose among statistical tests, because Vizion chooses the appropriate parts of the Data Desk test repertoire for your data and does all the calculation and graphing.

Vizion's speed isn't impressive in the simplest cases – even Excel can draw a modest column plot fairly quickly. But Vizion can turn 500 rows by three columns into a 3D-rotating scatterplot in a second – along with boxplots and dotplots of the same data. Data Desk-style palettes let you work directly with Vizion graphics, using simple mouse actions rather than plodding through dialogue boxes. Tables provide standard summary statistics for variables and their combinations, and you can get clear explanations of what everything means by clicking in any screen.

Data Description offers separately optimized versions of Vizion for Power Macs and 680x0 machines, which is why the add-on is so much faster than Excel.

The only complaint about Vizion is that it assumes that you have a vision of your own. If you're clueless about statistical graphics in a business context, you'll find only a few sample files in the tutorial.

Macworld's buying advice

Vizion is the first serious attempt to make the tools of exploratory data-analysis available to Excel users. Using it is the quickest way to find the relationships lurking inspreadsheets. **Charles Seiter**

Professional database developer

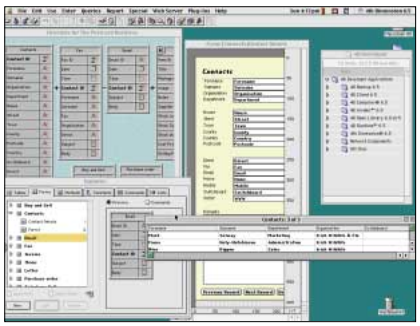
4th Dimension 6.5

Publisher: ACI (01625 536 178)
www.aci.co.uk
Pros: Stability and robustness; tools add graphing and security.
Cons: Complex; no 68x0 support; no manuals.
Price: Developer's Edition, £495, Standard £195.
Star Rating: ★★★★/7.6

ACI's cross-platform database, 4th Dimension 6.5, is an application for networks and stand-alones, across pure or hybrid client/server networks and the Internet. It's not as simple as Filemaker Pro to set up, but over large mixed networks it has greater robustness.

4D falls in that grey area of programming that lies beyond database solutions but short of programming proper. As such it is popular with many businesses that need more than a relational database. The price of this stability is complexity in design and so Developer Edition offers tools to simplify this.

The Developer Edition contains 4th Dimension, for designing a database solution, and a bundle of development and



All you need
4th Dimension gives you everything you need – from contact details to business structures.

productivity tools assembled for professional developers. The extra development utilities are: 4D Compiler – a native-code multi-target compiler; 4D Insider – a code-management system; 4D Write – a fully programmable word processor, integrated with the database; 4D Draw – for presenting data graphically; 4D Backup – a security module; and 4D Open Suite – an interface for 4D Server.

The new version adds formats with which developers can build complex relational databases feeding off, and feeding data to, a range of server types, such as Oracle and ODBC for deployment just about anywhere. HTML scaleability is also improved and 4D can be made to run as a Web server – with a little tweaking.

Developer's Edition upgrade main improvements include word processing, graphing and security options that fit smoothly into the development process and take little mastering. Security has been tightened and 4D Backup offers improved file-synchronization management.

However, the Developer's Edition is far from complete. Once the database has been built, its deployment over a client server network requires 4D Server – not included with the Developer's solution. Online help can't be accessed from the help menu. However, once help is opened from the Finder, it is pretty good.

Macworld's buying advice

If you already design databases in 4D or you must build for a large, mixed network, then the Developer's edition automatically upgrades you to version 6.5 and supplies new tools for a robust operation. Although ACI has a loyal following, if you are new to database development, and your aims only extend to a small Windows/Mac network or a Web server, then you would be better opting for Filemaker Pro's development bundle. **Mark Selway**



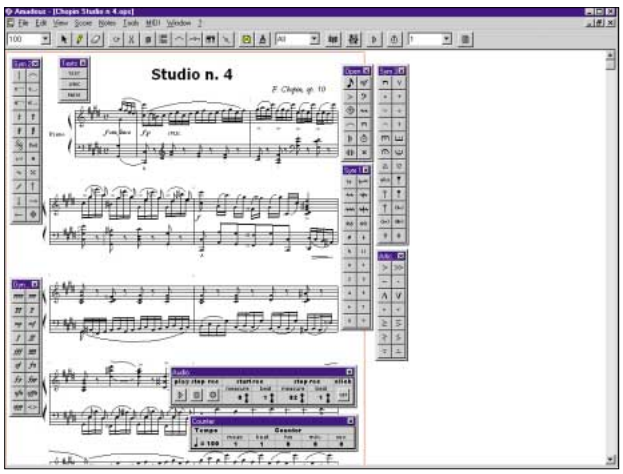
Win

... One of five copies of 4th Dimension with Macworld Jackpot. Ring 0900 1010 261 before 30/9/99. Calls cost 60 pence per minute.

Professional music notation software

Opus 1.5

Publisher: Sincrosoft **www.sincrosoft.com**
Pros: Different size staves; huge amount of functions and symbols.
Cons: Page hard to see; fussy options; manual hard to follow.
Price: Full version, £299; EDU, £199 (online).
Star Rating: ★★★/5.5



Take note
Opus looks like it was written by a musician, for musicians. Unfortunately, the program is fiddly, and everything from notation to opening MIDI files is difficult.

Hot on the heels of Sibelius for Mac (see reviews, August 1999) Encore and all the others comes Opus, another dedicated music-notation package, from Italian software publisher, Sincrosoft. On the surface, it seems to have everything you need; palettes full of notes and symbols, adjustable staves, reasonably clear instructions for MIDI; and technical sounding options. The problem is, it doesn't feel good to work with.

There you are, ready to notate your music, all you want is a short score, half-a-dozen separated and transposed parts, lyrics under the correct notes, the right chord symbols. If this *is* what you want, though, Opus will drive you crazy. Creating a new score is easy, trills the manual – a manual with several incorrect page references. It may be easy, but only when you have wasted half a day trying to understand layout options and starting again. And again.

Finally, you figure out the system, indicate for the nth time that you do want to use the printer port, and begin to record. I tried with eight bars of simple treble clef, shortest note a quaver, with a few accidentals. At first it looked like civil war in a wasp's nest, then I noticed that it was quantized to a 32nd. After changing to a 16th I began again. It looked a little better.

For light relief, I tried to import a MIDI file. This is a vital element of a notation program, because many people start from a sequenced track - but it wouldn't open the MIDI file without crashing me.

Macworld's buying advice

There is definitely a musician behind this program – there is a lot of useful stuff in it – but a program like this has to be friendly. Scoring music is fiddly, and musicians want notation software dearly – because we need all the help we can get. **Dorota Kotz**

Super-quick high-res scanner

Polaroid SprintScan 4000

Manufacturer: Polaroid (0870 608 0145)
www.polaroid.com
Pros: Highest optical-resolution desktop slide scanner on the market.
Cons: No USB version unavailable.
Price: £1,499
Star Rating: ★★★★/8.6

The SprintScan 4000 is Polaroid's top-of-the-range slide scanner, with its most obvious feature in the name – it's capable of scanning at an optical resolution of 4,000 pixels per inch. This makes it the highest resolution desktop slide scanner available, and of great interest for pre-press professionals wishing to scan 35mm transparencies and slides for print.

Such resolution benefits would be irrelevant , if the SprintScan's colour handling, usability, and construction quality wasn't up to scratch. Happily though, they are. I was especially impressed with the sturdy build-quality of the device. Rather than manually loading individual slides into the scanner, up to four mounted slides, or a six-image strip, can be fed in, using a supplied holder. This ensures that the transparencies are positioned accurately over the CCD – the 'eyes' of the scanner. An optional holder allows the scanning of APS films.



Cool running
Win a SpintScan 4000 with Macworld, *see page 94.*

The CCD uses a trilinear array – one each for red, green and blue – and a cold-cathode light source, resulting in an optical density range of 3.4, at 12-bits per channel. It also has true 36-bit colour depth. This gives scans richness of colour and better displays of shadows and other opaque areas.

The SprintScan is undeniably a fine piece of optical electronics. However, this is only one half of the equation, the other being the scanning software. The SprintScan comes with Polaroid's Insight software, a stand-alone scanning utility. A Photoshop plug-in allows you to Acquire an image from the SprintScan, but this just launches the Insight application.

The software take's a fair amount of experimentation to optimize for your particular requirements. I found it annoying that, by default, my scans were cropped, and that the colour balance in the preview scan bears no resemblance to the final scan. However, with some tweaking, you can soon get it outputting some superb quality images, and save your settings for future reference. The SprintScan boasts automatic level of dust and scratch removal, important features when your source is less than one-inch square.

At 4,000dpi, a typical scan will take just under a minute to complete, and saved as a TIFF will be approximately 40MB. This is comparable with most flatbed scanners, and should be fine for use in most DTP situations at letter size or under.

Macworld's buying advice

The scanner connects to the Mac with a standard SCSI interface – a USB version would be a welcome addition for users with newer G3 Macs. At £1,500, it's not the cheapest slide scanner on the market, but Polaroid has put the extra cost where it matters most – resolution. **Martin Gittins**

Web-caching time-saver

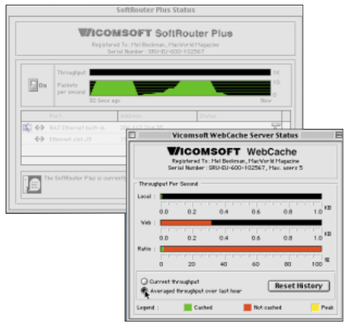
SoftRouter Plus 6.0.1

Distributor: Vicomsoft (01202 293 233)
www .vicomsoft.com
Pros: Web caching; network address translation and DHCP; DNS/DHCP integration.
Cons: Cacheing isn't always a good thing.
Price: Five users,£119; ten users, £175; unlimited users, £269.
Star Rating: ★★★★★/9.0

When hordes of network users are surfing the Web, the result is redundant traffic and wasted bandwidth – particularly when users are accessing the same Web sites. SoftRouter Plus 6.0.1 solves this problem by storing a copy of repeatedly accessed sites on a local server's hard disk for faster performance.

SoftRouter Plus also features world-class TCP/IP routing and network-administration services equivalent to those in expensive hardware routers.

Besides offering all the functions of a hardware-based router, SoftRouter Plus has a graphical interface and a set-up wizard that will have even non-technical users up and running quickly.



Going back to your routes
SoftRouter improves Internet performance when multiple users are chasing the same online content.

A good route

The package also includes a slew of helpful network-administration aids: Routing Information Protocol support for automatically configuring route tables, RADIUS (Remote Authentication Dial-In User Service), network address translation, Dynamic Host Configuration Protocol (DHCP), a dynamic DNS server that synchronizes names with DHCP-assigned addresses, host-access rights, and TCP/IP multi-homing. And with the right Mac hardware, you can even set up multiple-serial PPP dial-in ports for remote users.

But the big improvement in version 6.0.1 is a bundled caching Web-server, which makes copies of Web pages that users access most frequently and then retrieves them from the cache to satisfy repeat requests.

Caching is transparent – you don't need to reconfigure users' browsers to access a proxy server – and you can archive selected Web sites for access even when your Web connection is down.

In tests over an ISDN Internet connection with five remote users, SoftRouter Plus demonstrated T1-like performance when accessing cached sites.

For even better performance, you can run the caching server software on a separate machine, or even redirect HTTP requests to another vendor's caching server, freeing-up your own.

Macworld's buying advice

SoftRouter Plus 6.0.1's Web cache does wonders for Internet performance when multiple users chase the same online content.

The program's many other administration aids make it perfect for cross-platform networks. If you can't afford a £1,000 hardware router but have a spare Mac, SoftRouter Plus can be a budget-saver, too; its low per-user pricing makes it affordable for virtually any workgroup. **Mel Beckman**

Preflight and editing for Acrobat

Enfocus PitStop 4.0.1

Publisher: Enfocus
www.enfocus.com
DIstribution: Alta (0171 622 6606)
Pros: Creates a thorough preflighting report; good Global change functions; adds a number of new editing tools to Acrobat 4.0.
Cons: Cannot convert RGB bitmaps to CMYK.
Price: £199
Star Rating: ★★★★/8.1

With Adobe InDesign using PDF as a main file-format, and QuarkXPress continuing to develop its PDF import/export filter, PDF will grow in prominence. Many manuals are already presented in this format – often at the expense of paper-based ones – due to its cross-platform nature. However, there is a downside: editing them – a particular problem for publishers and repro houses. If, say, an advertisement is provided in a native file-format, like XPress, and requires a small change, no problem. If it is supplied as an EPS, FreeHand or Illustrator will usually cope. But PDFs can be very awkward, especially with embedded fonts and RGB images that have not been converted to CMYK – a separate article could be written on this thorny subject.

Enfocus CheckUp and PitStop were released to work with Acrobat Exchange 3.0; PitStop 4.0 combines the two products for use with Acrobat 4.0. The intention is to provide functions to preflight PDFs, correct various errors, and make creative edits.

For trouble-shooting, PitStop has a Preflight Control Panel. Here, a pre-set profile is selected that best suits the purpose of the PDF. Each profile has settings for a large number of properties, from the document format through to fonts, colours and images. Options are either a level of severity – ignore, caution or enforce – or an action – such as do, do not, remove or correct. Custom profiles can be created with the help of the on-screen wizard. PitStop will then create a report, in PDF format, of course, detailing every problem with the file, and it can show them individually.

The other side of PitStop handles file editing. Global changes include alterations to colours, fonts and the positioning of items, plus overprint/knockout characteristics and the addition of bleed and trim boxes. The colour changes work on all PostScript colours, XPress boxes and Illustrator items, but not on embedded bitmaps – a serious problem if there is a Photoshop RGB image in the file. This requires another of Enfocus's tools, Tailor. A shame that this facility is not included in PitStop – even just as an export option.



Corrective facility
The two sides of PitStop: check a file's viability through the Preflight Control Panel or creatively edit items with new tools.

PitStop adds to Acrobat with a variety of editing tools. Any object can be scaled, rotated or sheared; and any path can be altered. Text facilities include paragraph editing and reflow, with access to embedded fonts, as well as System varieties, eyedropper, path, mask and layer functions.

Macworld's buying advice

On the editing side, while both FreeHand and Illustrator will load PDFs, neither handle embedded fonts well.

Acrobat 4.0's editing facilities are reasonably basic, making PitStop the ideal answer. The preflight report is invaluable, showing a number of errors. Perhaps Enfocus may include Tailor's facilities in the next upgrade. **Vic Lennard**

Full-featured font management system

Adobe Type Manger Deluxe 4.5

Publisher: Adobe (01314 586 842)
www.adobe.com
Pros: Mac OS 8.6 compatibility; auto-activation facility for temporary fonts; font sets can be copied to hard disk; includes Adobe Type Reunion 2.5.
Cons: Some incompatibilities with XPress 4.04 and non-PostScript printers.
Price: £45; upgrade £35.
Star Rating: ★★★★/8.6

Adobe Type Manager is essential, without it on-screen text would get the 'jaggies'. For years, Adobe has included the basic ATM with its serious graphics programs, while the Deluxe version has been available as a separate package. Unfortunately, Mac OS 8.6 led to a number of incompatibilities with ATM Deluxe 2.0.3, resulting in the release of version 4.5, with includes some new features as well.

When launched for the first time, the program searches for fonts and adds them to its Known Fonts list. This can be run at any time and it also checks for duplicate fonts. Fonts can then be dragged and dropped into sets – using a two-sided window that shows both fonts and sets – either individually or in groups. A swift double-click on a font brings up a sample preview box that can be viewed or printed.



Let's face it
Creating sets from the Known Fonts list is simple.

There are major new features in version 4.5. The first is the ability to change a set's restart characteristics: Delete or Deactivate for a temporary set, Activate for permanent sets, and Leave As Is. Secondly, option-dragging a set to a hard disk copies all fonts within that set to a folder.

Adobe Type Reunion 2.5 is also included in the package. While this has few new facilities, it is supposed to be more robust with Mac OS 8.6, but unfortunately appears to have a serious incompatibility with QuarkXPress 4.04 and OS 8.6, refusing to group families or show the typefaces in either the measurements box, or the format character dialogue box. Adobe is aware of this but has not yet offered a workaround. Also, ATM Deluxe 4.5 has some problems printing to non-PostScript printers.

Macworld's buying advice

If you want a font-management system, it's a straight shoot-out between ATM Deluxe 4.5 and Extensis Suitcase 8. Both offer basic font organization and WYSIWYG font menus through a separate control panel. ATM Deluxe's auto-activation facility works with most applications; Suitcase 8's only with XPress, although its application sets act in a similar way to the Global option. Incompatibilities may make ATM Deluxe 2.0.3 a non-starter, but the superior auto-activation feature and ability to copy font sets to disk give ATM Deluxe the edge. **Vic Lennard**



Win

... One of five copies of ATM with Macworld Jackpot. Ring 0900 1010 262 before 30/9/99. Calls cost 60 pence per minute.

Return of marvellous graphical type tool

TypeStyler III

Publisher: Strider Software
www.typestyler.com
Pros: Amazing degree of customizable type effects; easy to learn; simple Web animations.
Cons: Could be cheaper.
Price: $295; special introductory price of $149.
Star Rating: ★★★★/8.6

When adding shadow to text was considered so cool that you called your family round to gawp, Brøderbund's TypeStyler was a god. With TypeStyler's headline magic at your fingertips, the whole street would visit and drop to their knees in worship. In the days before Kai's Power Tools and affordable 3D, TypeStyler was the last word in type manipulation. And even that word was shaped like a fish…

TypeStyler would take your words and fashion them into shapes you imagined only draughtsmen could handle… and some draughtsmen wouldn't touch with an oversized T-Square.

The fish didn't swim alone. Text could be slanted, made circular, blown into a balloon, perspectivized, and twisted – as well as molded into peculiar presets, such as pennants, Cinemascope, and the Lonsdale logo. If TypeStyler had followed the upgrade course of Photoshop, it would out special-effect LucasArts and feature more animation than a Pixar DVD box-set.

Instead, Brøderbund let v1.5 stagnate until even the fish got bored and swam off.

Several years later and the program is back in the hands of its original developers. Strider Software's TypeStyler III (TS3) is no longer merely the king of banners and crazy headlines. This long-awaited release (actually version 3.46) has much-enhanced print features and new Web and video-titling functionality.

You can bend, squeeze, stretch, emboss, twist, and rotate text using all PostScript Type 1 and TrueType fonts, or any of the 110 provided display fonts. You can add transparency, perspective, shades, hard and soft shadows, inlines, outlines, chisel and bevel effects, and levels of blur, noise and glows; or apply bump maps, pattern, gradient, starburst, or dual blend fills.

And TS3 is no klutz when it comes to kerning: the spacing between letters, letter pairs, words, and lines of type can be adjusted any time during the design process. Whatever mess you've fashioned from your text, all type settings remain editable whether the type is straight, distorted, or placed around arcs.

You don't have to be a craftsman to fashion type into metallic and glossy effects that simulate chrome, gold, glass, plastic, and other materials. Type can be filled with imported pictures. And, remarkably, individual style elements – such as outlines, fills, and shadows – can be blurred or filled with images independently.

TS3 supports drag-&-drop with like-minded apps, and works with Photoshop, Illustrator, XPress, and FreeHand, among others. Import support encompasses EPS, GIF, Illustrator, JPEG and PICT. It can export as GIF, native Photoshop (with layers) and Illustrator, EPS and TIFF (with clipping paths), and even as complete Web pages.

Yes, a product is nothing these days without some Internet aid or functionality. And TS3 is right in there. You can export your TS3 documents as Web pages – the HTML is all there for you to paste into PageMill or GoLive if you prefer. You can assign URLs to any object, as well as create (often hilarious) animated GIFs and JavaScript rollover effects. Sure, there's better programs for making this stuff, but none are as much fun as TypeStyler.



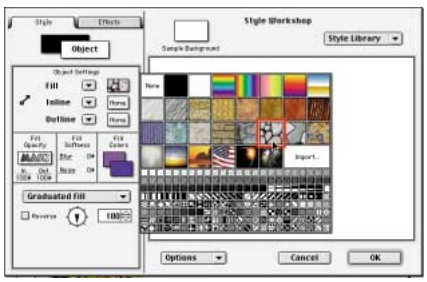




Cause for effect
OK, so I've created some gaudy examples here, but in the hands of someone with better taste, TypeStyler III is going to make sensational magazine mastheads and Web buttons. Where else can you fashion a wooden fish or turn Muck into brass?



Old school edits
TypeStyler's basic interface (below) has hardly changed – so old hands can start where they left off, and new users can get to work immediately.



Macworld's buying advice

TypeStyler III is so easy to use and such a rib tickler that many will dismiss it as a toy. But TS3 is no mere PowerGoo. However they're used or misused, the type effects on offer would take even design pros an age to create in Photoshop. And since when did Mac people start deriding intuitive software that occasionally raises a smile?

For those of us too lazy to put together complex Photoshop Actions and brave enough to risk a few Starburst Fills, TypeStyler III is still a pretty big fish in a crowded design ocean. **Simon Jary**

Patrick Moore in a box

Starry Night Pro 3.0

Manufacturer: Sienna
www.siennasoft.com
Distributor: Guildsoft (01752 895 100)
Pros: Excellent, simple to use interface, backed up by live guides to astral events.
Cons: Higher resolution pictures of planets would be an improvement.
Price: £99.99
Star Rating: ★★★★/8.8



The Sky at Night
Starry Night shows you information on virtually any object in the night sky – from communication satallites, to the moons of Jupiter. It will also tell you where to look and when, so you need never miss an astronomical event.

Astronomy is not the most fashionable science around, but it is one of the easiest for an amateur to get involved with. Armed with a pair of binoculars, or even just the naked eye, you can see plenty of interesting things in the sky, as Patrick Moore will attest to. The problem, for the casual observer, is how to figure out what it is you are looking at. Starry Night is the answer to all your wishes, whether you are a casual observer, or an avid amateur. It is simple enough for people to use without any prior knowledge on the subject. All you need to know is roughly where in the world you are, and what time it is.

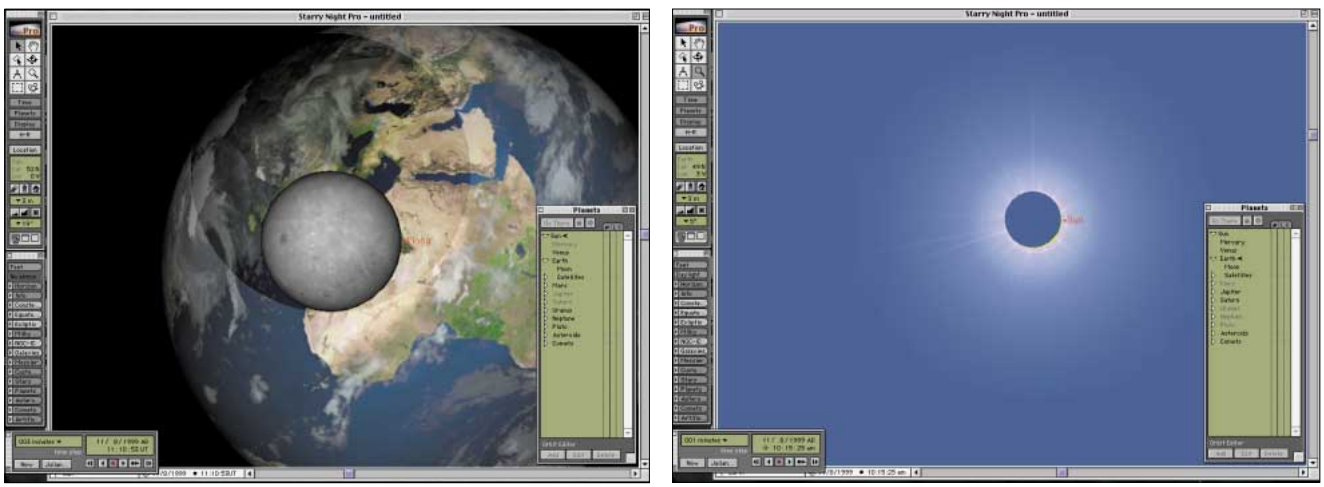
Once you have these details Starry Night produces a live sky map, giving you all the information you could want on every visible star or heavenly body. Simply hold the cursor over the object of interest and you will see its name, position, and other astronomical data. Double click on the object and you are presented with extra data relevant it. Stars have properties such as colour, temperature, radius and magnitude. Galaxies, asteroids, planets and others all have appropriate information. If, however, you would like to learn even more about an object a button, connects you to **www.livesky.com**. This is a Web site devoted to astronomical information, and each star, planet or comet is linked to a particular Web page, providing links to still more information. For example, if you spot a satellite circling the globe you can click on it to find its name, double click to find out the path it travels, and link to livesky to see who owns it and what it is doing. This kind of feature makes it possible for anybody, with absolutely no training, to figure out what is going on up there.

One feature that at firsrt seemed useless was the ability to view things from different planets. This turned out to be a really interesting feature, for instance viewing the earth from the moon. When you set the date to August 11, 1999 , at around 11am you can watch the moon cast a shadow across northern Europe. If you missed the real thing this is an ideal, and safe, way to re-run the eclipse viewed from the earth, moon or even the sun.

There are plenty of other features for the more enthusiastic sky-watcher who actually intends to go out at night and look at the stars. First, you need to take the information with you, and you can do that in two different ways. You can print the sky map out, conveniently in reverse colours so that you don't use up all your sky-black ink in the first print. If you're lucky enough to own a portable Mac, there is a special feature for using that in the field. When you're looking at the sky your eyes need to become accustomed to the light before you can see the maximum number of stars. This state of pupil dilation is easily ruined if you need to look at a bright screen to get your bearings. Those clever people at Sienna have added a feature that makes the screen dim and display red images. This means that your pupils don't snap shut when you look down at your screen. It may seem dark when you view it in normal light, but the red image holds all the information of the normal screen and is quite clear when your eyes are fully adjusted.

Macworld's buying advice

One of the most useful of the new features is the "What's Up Tonight?" menu option. This links you to a Web site that is like an online version of *The Sky at Night*, but without Patrick Moore. It gives an up-to-date list of all the things visible and interesting in the sky. Now I don't want to take anything away from Patrick Moore, but *The Sky at Night* is only on once a month. The "What's Up Tonight?" option is like having your own Patrick to guide you through the sky, and you can't beat that. Starry Night Pro allows anybody to understand what is going on in the universe around us, and I'm sure we are all the better for it. **David Fanning**



Moon shot
With Stary Night the eclipse can happen every day, not just every 100 years. You can also view it from the Sun (above, left), the Moon and the Earth (above, right)

Video-effects package

Commotion 2.0

Distributor: BIT (01420 838 11)
www.bit.co.uk.

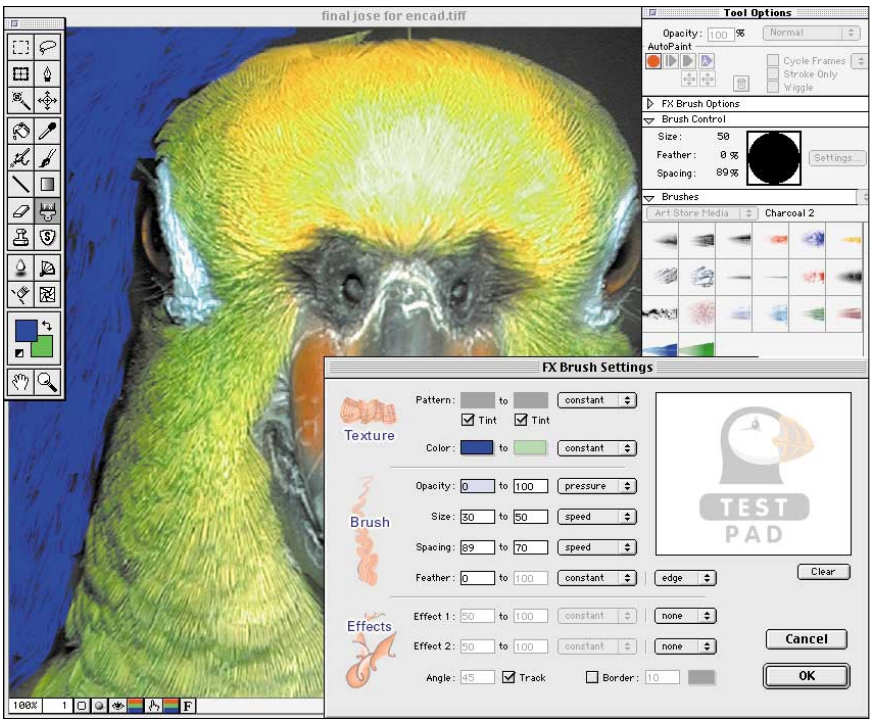
Pros: Rotosplines and RAM playback for creating mattes; supports After Effects filters.

Cons: Motion Text interface could be more interactive.

Price: £1,695

Star Rating: ★★★★/8.4

Feeling somewhat inspired by the summer's effects-laden movies? You'll be happy to know that you can create your own special-effects extravaganza on your Mac, with the same tools the professionals use. One of those tools is Commotion 2.0, the latest upgrade to the excellent rotoscoping and painting program. Building on its predecessor's facilities for creating mattes, painting on moving images, and touching up videos, this version includes new effects-brushes, support for Adobe After Effects filters, and a new text filter.



Brush strokes
The FX Brush feature will appeal to those looking for natural-media video painting.

FX Painting

As in earlier versions, Commotion 2.0's strength lies in its ability to work with movies in real time. The program loads QuickTime movies into RAM, so you can preview short video clips – or long clips, if you have enough memory – at their full size and frame rate. Because most single shots in a movie tend to be short – and effects sequences are even shorter – a few seconds of video is usually all you need for the kinds of effects you create in Commotion.

Commotion's powerful spline tools let you create mattes by outlining shapes using an Adobe Illustrator-like pen tool; you can then animate these rotosplines over time, and combine them with the program's motion-tracking features to create animated mattes. The only new twists to version 2.0's rotospline features are that you can now simply grab the pen tool and start drawing – you no longer have to go to the Rotosplines palette first – and you're allowed up to 100 undo's per document.

Version 2 retains its predecessors' assortment of brush and clone tools for painting. It also adds some new FX Brushes – really just small paint-on texture files – for creating everything from subtle highlights and halos, to big, gaudy brushstrokes. The program offers a wealth of brush parameters, including spacing, opacity, and feather; each has a range of values, depending on the brush's speed, pressure, tilt, and bearing – you'll need a drawing tablet for the last three. You can create your own brushes, but Commotion ships with such a huge assortment of pre-built brushes that you may never need to create your own.

In addition to flexibility, the brushes offer impressive speed and performance. Even complicated brushes paint smoothly, and the program has no trouble keeping up with the speed of your brushstrokes. The addition of FX Brushes to Commotion 2.0 should appeal to effects creators, who have been relying on MetaCreations' Painter for natural-media video painting. Although Commotion lacks Painter's full suite of paint tools, it offers a much better interface for painting on moving video.

FX filters

Commotion 2.0 not only supports After Effects plug-ins, but also adds a timeline interface that lets you animate plug-in parameters just as you would in After Effects. The timeline lists the filter's properties in a column and lets you define multiple, separate keyframes for each property. To set a keyframe, you drag the current time marker to a new location on the timeline and change the value of the property you want to animate. Although the timeline lacks velocity and function curves, its simple linear and ease-in, ease-out interpolations between frames offer all the control you'll need for most effects.

New users should note that filters in Commotion are destructive. Applying the effects alters the movie's frames; you can't go back and tweak a filter's settings without reverting to the last saved version.

If you've used an earlier version of Commotion, you'll notice that the current version replaces many of the basic filters with equivalent, but faster, filters from ICE. In addition to improved performance, the new filters support hardware acceleration using BlueICE hardware.

One of the new filters, Motion Text, lets you create and animate type. Unfortunately, its controls aren't as interactive as they could be. To add a title to a movie, for example, you select the Motion Text filter and enter your text in a somewhat clunky modal dialogue box. In addition, you can have only one font and type size per title.

From the Motion Text dialogue box, you set parameters and see the results in a tiny preview window. In addition to the usual size, colour, and position parameters, Commotion lets you specify horizontal and vertical scaling, feathering, drop shadows, and curve – as defined by two points of a spline. Instead of using interactive controls to specify position or spline points, however, you control these parameters numerically. A simple interface, that lets you click within the preview window to define position and curve, would be nice.

The ability to animate text within Commotion, rather than After Effects, is very handy and saves time you would otherwise spend switching between the two programs. Because it's so much faster to animate text in After Effects, however, you'll probably want to use the Motion Text plug-in for only the simplest jobs.

Macworld's buying advice

Commotion 2.0 isn't a huge upgrade, but its animatable filters, Motion Text filter, and FX Brushes are handy and well implemented. They're also a sign that Puffin is aiming to expand the program's range beyond simple rotoscoping. Whatever the future holds, Commotion 2.0 is an indispensable tool for motion-effects professionals. **Ben Long**

Audio-CD burning software

Jam 2.5

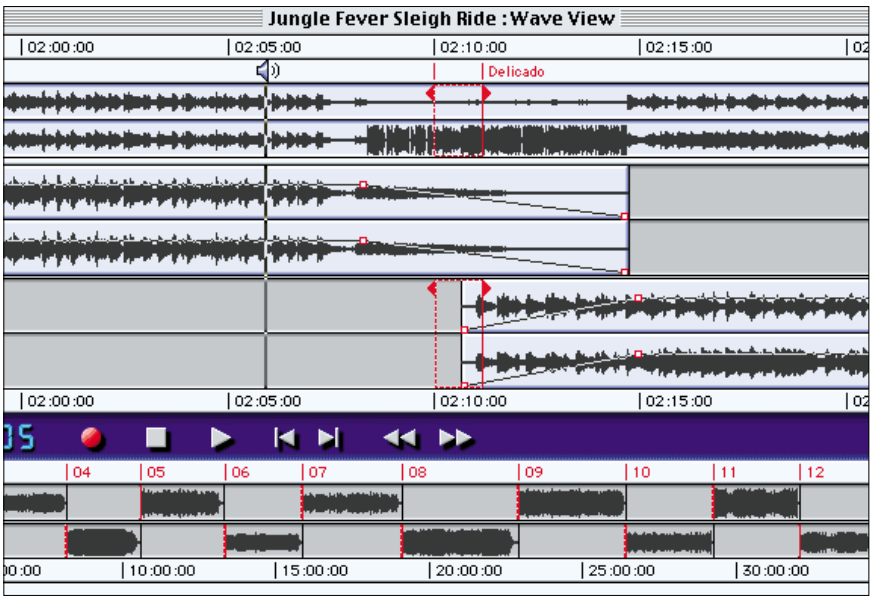
Manufacturer: Adaptec (01276 854 500)
Pros: Drag-&-drop support; individual track testing.
Cons: Can't impose track markers.
Price: £277
Star Rating: ★★★/6.6

MasterList CD 2.1

Manufacturer: Emagic
www.emagic.de
Pros: Autolocate function; support for Digidesign hardware.
Cons: No drag-&-drop support; unintuitive interface; expensive; copy protected.
Price: £329
Star Rating: ★★★/6.9

WaveBurner

Manufacturer: Emagic
www.emagic.de
Pros: Intuitive waveform editing; direct recording into program.
Cons: No autolocate function.
Price: £149
Star Rating: ★★★★/7.8



Virtual jam
WaveBurner beats MasterList and Jam on price – it's over £125 cheaper than Jam, and less than half the price of MasterList.

Creating custom audio CD-ROMs is no longer an exotic pastime – practiced only by those blessed with more money than sense. CD-ROM writers, or burners, are now widely available, and affordable enough for us common folk. They also come with software so simple that a reasonably bright chimpanzee could burn a CD.

As easy and economical as this process may be, the software that ships with today's CD-ROM burners – usually Adaptec's Toast – isn't full-featured enough to produce truly professional audio CDs.

If you want to create discs without audible gaps between tracks, tracks that cross-fade into each other, or an audio master CD for a CD-mastering house, you need Adaptec's Jam 2.5, Digidesign's MasterList CD 2.1, or Emagic's WaveBurner 1.0. The title you select depends on your hardware, the intended purpose of your CD, and your tolerance for an unintuitive interface.

Hold the Toast, please

Unlike Toast, which produces both data and audio-CDs, the three applications we reviewed create only audio CDs that conform to the Red Book standard. All three let you work with the minutiae of Red Book audio – the P and Q sub-codes that control aspects of audio CDs, such as copy protection and index numbering. The apps also let you create cross-fades between tracks, and tweak the volume of individual tracks.

Toast is still capable of writing audio CDs, but it is only really useful for personal compilations. A new version of Toast(v4.0) is due out soon, which improves the audio CD side of its many-faceted talents. The improvements are geared towards MP3 uses than traditional audio mastering.

Although none of the three requires special audio cards – you no longer need an add-on audio board to use MasterList CD – hardware is still a consideration. MasterList, for example, lets you monitor your tracks through Digidesign's audio cards, that output sound at higher bit-rates than Apple's 16-bit Sound Manager.

WaveBurner offers similar support for Emagic's Audiowerk cards, but the version we tested doesn't yet support Digidesign cards. Likewise, MasterList CD won't recognize the Emagic cards. Jam is content to route sound through any card that has a Sound Manager driver.

Another consideration is the kind of work you do. MasterList CD is intended for professional users who prepare reference CDs for duplication. Unlike the other applications, it lets you set up to 100 reference points within a CD track list; you can compare the volume among several tracks by calling up different locations in the playlist.

Complete though MasterList CD may be, its interface is anything but friendly. There are very few graphical elements here – mostly number fields and dialogue boxes. Also, unlike Jam and WaveBurner, MasterList CD doesn't support drag-&-drop; you must add tracks via a dialogue box rather than simply dragging sound files into a track list. And, regrettably, MasterList CD is copy protected.

WaveBurner's interface is a different story. This program looks very much like an audio editor, complete with waveforms and graphic-handles that you drag to adjust the length and shape of cross-fades. You can also increase or decrease the gap between tracks by dragging; simply click on the track and drag it left or right. Like Jam, WaveBurner has a preview feature that plays all the transitions from track to track sequentially – helpful when you want to review the pacing of your CD. And WaveBurner lets you record audio directly into the program; the other two applications require that you first record audio into a separate program.

Jam's interface is much like Toast's. To create a track list, you drag-&-drop files into Jam's main window. From there you can create cross-fades using the MasterList method: choose a cross-fade type; set the duration of the cross-fade in a numeric box; and determine whether it occurs pre-splice, centered, or post-splice.

As with Toast, you can adjust the RAM cache, preventing underrun errors, and test each track individually before committing to the burn.

One annoyance I hope Adaptec will address is Jam's inability to impose track markers – something both MasterList CD and WaveBurner support. In other words, you can't take one long audio file – the side of an LP, for example – and then place a track marker at the beginning of each cut. Instead, you must create regions in the file using another program and then bring the file into Jam.

Macworld's buying advice

Audio-mastering engineers, who own Digidesign audio cards, should ignore MasterList CD 2.1's rough interface and stick with the best tool for their trade. Jam 2.5 is perfectly capable, but WaveBurner costs £128 less and is more flexible. I'll take my Toast with WaveBurner, not Jam. **Christopher Breen**

Network management software

FileWave Enterprise Edition 3.2

Distributor: Portland (0171 608 1518)
Pros: Sophisticated software-distribution capabilities; flexible server-placement options.
Cons: Non-intuitive set-up; expensive; heavy hardware demands.
Price: £1,400 (20 users).
Star Rating: ★★★★/8.1

netOctopus 3.0

Distributor: Principal (01756 704 444)
Pros: Easy, on-the-fly asset and configuration reporting; intelligent licence management.
Cons: Software-distribution tools limited without resorting to AppleScript.
Price: 11-40 users, £47.65; 50-99 users, £45 per user.
Star Rating: ★★★★/7.8

You could count your company's Power Macs on your fingers and install system software manually on each user's computer – or you could invest in a tool that does those things for you. Netopia's netOctopus 3.0 and Wave Research's FileWave Enterprise Edition 3.2 offer a simpler way to deliver software over a network and maintain a database of hardware and software assets for Mac and PC configurations alike.

netOctopus is most useful when creating configuration reports and monitoring software use, although its distribution component can't manage complex software packages.

FileWave, though marred by high deployment costs, shines as a software-delivery system that can move complex combinations of applications, system files, and documents onto client workstations. netOctopus is appealingly simple to set up and use, consisting of an administrative application and a client control panel for each Mac or PC. FileWave's client software is similar, but divides its software-distribution and asset-management functions among several server tools and administrative applications.



Different strokes...
FileWave is best for continuous monitoring, but netOctopus is better for taking a live look at a network.

To distribute software with FileWave, you create file-sets that reside on the repository server in a proprietary format. The easiest way to create file-sets is to use FileWave to scan the contents of a hard disk connected to the administrator's Mac, and install the software you're distributing via FileWave on the same disk. FileWave builds a package based on the files you have modified or added since taking the "before" snapshot.

netOctopus uses a much simpler arrangement, in which you distribute files or folders individually on Macs, as well as PCs. The trade-off: you can't install applications, extensions, and preferences simultaneously, as you can with FileWave.

Asset tracking

Mac managers may recognize FileWave's Asset Trustee database as a remnant of TechWorks' long-dead Asset Manager. With an ACI 4th Dimension database as its engine, Asset Trustee inventories computer hardware and software, right down to the amount of VRAM installed, and – if you're inclined to enter it – the depreciation method used to pay for each system. Wave Research added a scanning function to the database, making it possible to track changes to hardware and software as they occur and to combine static data with dynamic information. (FileWave is also available without Asset Trustee).

The asset-management interface in netOctopus is oriented less to printing reports and tracking inventory than toward taking live snapshots of the network and managing software use. Templates and AppleScripts offer a quick look at common configuration settings for a group of systems. This is useful if you want to determine whether your systems are capable of accepting a Mac OS upgrade or have properly configured IP addresses.

Both packages allow you to export data. netOctopus includes an HTML export feature, although FileWave goes one better, by building in Web-server software that displays asset reports in HTML. And both include substantial printed documentation, though FileWave's manual is disjointed and omits important information.

Macworld's buying advice

Although it's complex, FileWave Enterprise Edition 3.2 has no equal when it comes to software distribution. If you distribute lots of software to lots of users, FileWave may be worth the steeplearning curve.

If you can make do with a bit less, netOctopus 3.0 rewards your flexibility with a smart, straightforward distribution interface. For asset managers, netOctopus is the best choice when you need to take a 'live' look at your network, or monitor the way software is used; FileWave's asset-management features will appeal most to managers who need both continuous monitoring and static-information gathering.

Shelly Brisbin

Turn your Mac into a stereo

SoundJam MP

Distributor: Casady & Greene
www.casadyg.com
Pros: Groovy graphics, quick-ripping sounds and great quality playback even when streaming.
Cons: Could have a better organized file system.
Price: $49.95 (£30), download.
Star Rating: ★★★★/8.9

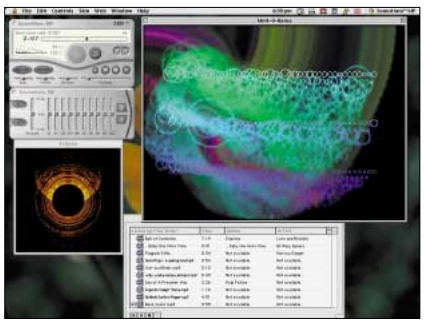
QuickTime 4.0 can do it, Mac Amp can do it, and soon most Internet oriented apps will be playing MP3s. So what makes SoundJam MP so great?

QuickTime fails to organize the MP3 files in a useful way. MacAmp is good, but essentially it's a shareware application. Get the beta and take a look – it is not as professional as SoundJam MP.

SoundJam MP has all you need to convert your Mac into your main sound system. To play your CDs, you just put them in your drive and you have instant access to them. If you don't want to keep your CD in the drive, you can rip the contents into MP3 format. It will take up a tenth of the space of a normal CD, and I defy you to tell the difference.

Another thing SoundJam has over its competitors is its ability to play streaming MP3s. Although you usually need a faster connection than RealAudio, the sound is higher quality, and less prone to pauses.

An extra, albeit trivial, bonus is the live graphics options. Like an audio lava-lamp, you can watch trippy graphics as you chill



Tripped out
SoundJam combines the best tunes with cool graphics.

to you favourite grooves. Well, not grooves exactly – but you get the picture.

Macworld buying advice

If you just need to play an occasional track, anything will do. If you want your Mac to be your stereo, SoundJam MP is the way forward.

David Fanning

Me, myself and iBook

Announced at Macworld Expo, Apple's consumer portable is a very high wireless act. Here, we take a hands-on tour of the 'iMac to go'.

By David Pogue & Simon Jary



ILLUSTRATION BY JAMES WALKER

continues page 74

Most of what you need to know about Apple's new iBook you can tell just by looking at it: it's a thing of beauty. Smooth, sculpted, and sleek, this laptop's siren song begs you to pick it up and run your finger across its silver metal-trackpad plate, or to caress its orange or blue rubberized edges.

When Apple interim CEO Steve Jobs introduced Apple's long-awaited, top secret, deliriously anticipated consumer laptop at the Macworld Expo in New York, he emphasized the portable's sexiest features: its numbers.

In reverse order, the stats include a $1,599 price tag, likely to translate to a £1,099 (ex.VAT) UK price-tag, although Apple would not confirm this pricing; an 800-x-600-pixel, 12.1-inch, millions-of-colours, active-matrix screen that you can switch into 640-x-480 pixel mode; a 300MHz G3 processor; a built-in 56K modem; a 24x CD-ROM drive, 10/100-BaseT ethernet; an anticipated six-hour battery life (a figure that should be viewed as skeptically as you should all claims of battery life); and a nifty carrying handle, that automatically snaps flush against the unit when not in use.

The statistics for the optional add-ons are equally amazing: With the addition of Apple's £75 AirPort card, up to ten iBooks can connect to the Internet, or to other iBooks, at 11 Mbits (1MB) per second, when within 150 feet of a £199 AirPort Base Station. Classroom personnel worldwide are slavering at the possibilities.

The untold story

In unveiling the new laptop, however, Jobs didn't have the time or inclination to offer many juicy details – little pieces of both good and bad. Only when we got to play with an iBook and chat with the iBook's designers (who joked that they were seeing daylight for the first time in months) did we find out the details of the no-longer-mysterious, but still mystical, laptop.

main continues page 78; opinion and detailed pictures, pages 74-75

iBook: the lowdown

iBook, available in September for around £1,199, features:

- Sharp 12.1-inch (diagonal) active-matrix TFT SVGA display with millions of colours at 800-x-600-pixel resolution;
- Fast PowerPC G3 processor running at 300MHz, with a high-speed 512K backside L2 cache;
- "Up to six hours" running time on a single charge of its Lithium-Ion battery, according to Apple;
- Instant Internet access via 56Kbps modem or 10/100BaseT ethernet;
- Cool-looking power adaptor that lets you wind up its cord like a yo-yo;
- AirPort wireless Internet connection option (antennas built-in);
- Full-size keyboard;
- ATI RAGE Mobility graphic controller, with 4MB SDRAM video memory and 2X AGP;
- 24x CD-ROM drive;
- Productivity, education and games software bundle;
- USB port for peripherals such as printers, input devices and storage devices;
- Mac OS 8.6;
- 32MB SDRAM, expandable to 160MB;
- 3.2GB IDE hard-disk drive;
- Built-in stereo headphone jack.

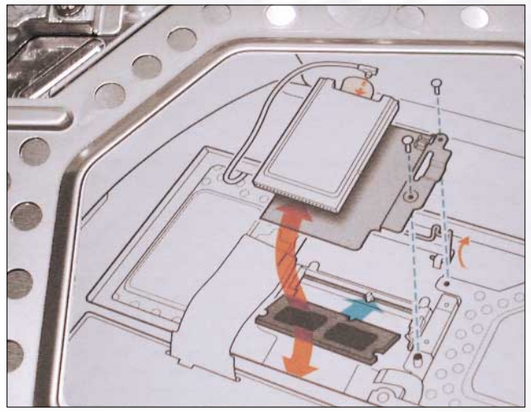




(Left) Travel card *If you want to make your iBook truly wireless, you need Apple's AirPort technology (see sidebar, right). The AirPort Card fits neatly underneath the pop-out keyboard.*

(Bottom left) Back to base *Those wires have to go somewhere. Plug you modem and ethernet cable into the back of the AirPort Base Station. And now you can network with your iMac or Power Mac, or browse the Web up to 150-feet away – wirelessly.*

(Bottom right) Easy instructions *How do you get that AirPort Card in place? Call an engineer? Cry over complex directions? No, it's a breeze with Apple's plain and simple diagram.*





AirPort 99: flying saucer to the rescue

Brought out in a supporting role for Apple's iBook, AirPort received an enthusiastic response from the crowd at Macworld Expo/New York '99. Analysts, however, were mixed in their assessment of the wireless networking technology's potential effect on Apple's bottom line. Whatever the analysts say, word on the street is AirPort 99 will not be a disaster move for Apple.

Due in September, AirPort is a wireless LAN that comprises the £199 AirPort Base Station (which contains a 56Kbps modem and a 10BaseT ethernet port for connecting to a phone line, cable modem, DSL modem or LAN for terrestrial Internet access), a £75 AirPort Card that installs into a special slot in the iBook (underneath the full-sized keyboard), and AirPort Software Access Point software. The units communicate via radio-frequency signals, giving them a range of up to 150 feet; unlike infra-red signals, the base and card don't need to be in a line of sight from each other.

According to Apple, the iBook is "the first computer designed for wireless networking from the start" – with two built-in antennas hidden on either side of the screen.

In an 18-month-long collaboration, Apple teamed-up with Lucent Technologies, a leader in wireless networking, to design and deliver AirPort. Since AirPort is based on the established IEEE 802.11b standard, many third-party products built to this standard will be able to work with an AirPort network, Apple said. In addition, since AirPort uses the Direct Sequence Spread Spectrum (DSSS) variant of the IEEE 802.11b standard, data rates can reach an ethernet-rivalling 11 Mbps, far better than the 2 Mbps of Frequency Hopping Spread Spectrum (FHSS) technology used by some Windows systems.

Apple said that multiple iBooks can be connected to one Base Station, easily creating a home, school or office wireless LAN; in addition, AirPort-equipped computers can communicate directly without a Base Station, though they won't be able to share an Internet connection.

Lou Mazzucchelli, an analyst at Gerard Klauer Mattison, said that AirPort "elevates the whole profile of wireless networking" and will be a big hit for Apple. He noted that although IEEE 802.11 networking hardware has been available for Windows computers, such systems have been expensive as well as difficult to use and maintain. In addition, he said, most of the current competition is limited by its use of the slower FHSS standard.



Mazzucchelli said that compared with current wireless LAN options, AirPort is fast, friendly and priced "pretty aggressively." He added that he'd had the chance to use an AirPort system and found it survived "banging on it pretty hard."

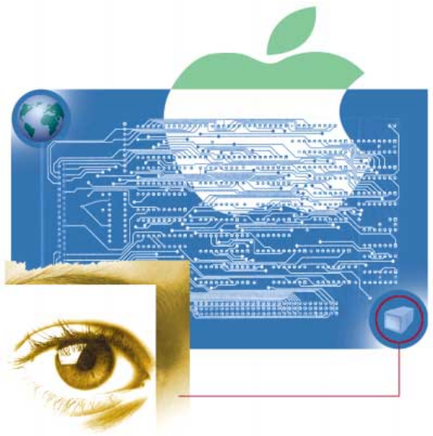
While she said it puts Apple in a "technology leadership position," Katrina Dahlquist, senior research analyst at IDC, was less sanguine in her assessment of AirPort. She predicted that iBook users – the initial AirPort market – will be slow to purchase the technology with their notebooks; Dahlquist speculated that nearly £300 for a networking package will be too steep a price for most single users in the consumer and education markets.

Nevertheless, Dahlquist said the situation could change if the iBook catches on, especially at sites with multiple users connected to one Base Station. Dahlquist said Apple could reach this critical mass, at least judging from initial, unscientific research methods: "I've been hearing the same buzz about the iBook as about the iMac – there's a definite 'wow' factor."

– Daniel Drew Turner

Vision thing: Think the iBook is impressive? Wait until you unplug it.

No strings attached



New York: another Macworld Expo, another ground-breaking product announcement from Steve Jobs. Apple's performance at its major media events has become so predictably unpredictable that it's a wonder Steve doesn't just phone in the keynote from home. Then again, Apple's iCEO knows that the keynote address of the summer Macworld Expo is his biggest stage, deep in the heart of the world's media capital.

First the iMac, then the blue-&-white Power Mac G3, and now the iBook – Apple just keeps knocking them over the fence. And while nothing is ever perfect, the iBook comes pretty darned close. It's relatively cheap, surprisingly fast, offers a full set of features, and has a beautiful design.

At first glance, you immediately notice that it looks exactly like a portable iMac should. If a product was ever born to be a runaway best-seller, this is it. The only question that remains is, how will people get their data on and off their iBooks? But if you consider all the issues surrounding the floppy-less iMac, that's a debate we've heard before.

To me, the biggest thing about the iBook announcement was not the iBook itself. Don't get me wrong – I'm not blasé about Apple's darling portable. (I hesitate to call the iBook little – it's actually larger and, at 6.6 pounds, heavier than the new bronze PowerBook G3). The price – £1,299 (inc. VAT) – isn't rock-bottom, but it certainly is impressive, given the power in this little package.

And while they're not top-level features of the iBook, the little details found on this new computer make all the difference. For example, a spring-loaded handle that lets you carry it easily; a latchless cover that opens and closes as easily as a jewellery case; and a power cord that actually includes a cable wrap, so that you don't have to stuff a wadded-up ball of wire in your bag every time you're on the move.

The iBook should especially appeal to students and anyone else who needs an easy-to-use portable computer that doesn't cost an arm and a leg … and who appreciate style in their products.

The most visible difference between the iBook and all other portable PCs is something as invisible as the air – AirPort, Apple's wireless networking product. Imagine, if you will, setting up a network that's as fast as (or even a tiny bit faster than) 10Base-T networking without having to run any cables. Or even more impressive, imagine surfing the Net from your high-speed home DSL line (when we get it in the UK later this year) grabbing some sun in your garden.

If you're like me, you've got a house full of computers and a house full of computer users but only one connection to the Internet – in my case, DSL. Your options? Get down and dirty in your attic or crawlspace running wires throughout your house, dream about HomePNA (a networking system that piggybacks on your existing telephone wiring, but which BT is putting the stops on in the UK at the moment), or go wireless.

Until now, wireless networking has been far too expensive for most people, and hasn't been particularly Mac friendly. But the AirPort and its $299 ethernet-friendly base station changes things – not just for the iBook, but for all Macintosh users.

Already, Farallon has announced a $299 wireless networking PC card, compatible with AirPort, that will give older PowerBooks the ability to roam freely at ethernet speeds. And it's only a matter of time before other hardware appears that will let you connect desk-bound computers in far-flung parts of your house without getting up close and personal with the fibreglass insulation in your ceiling.

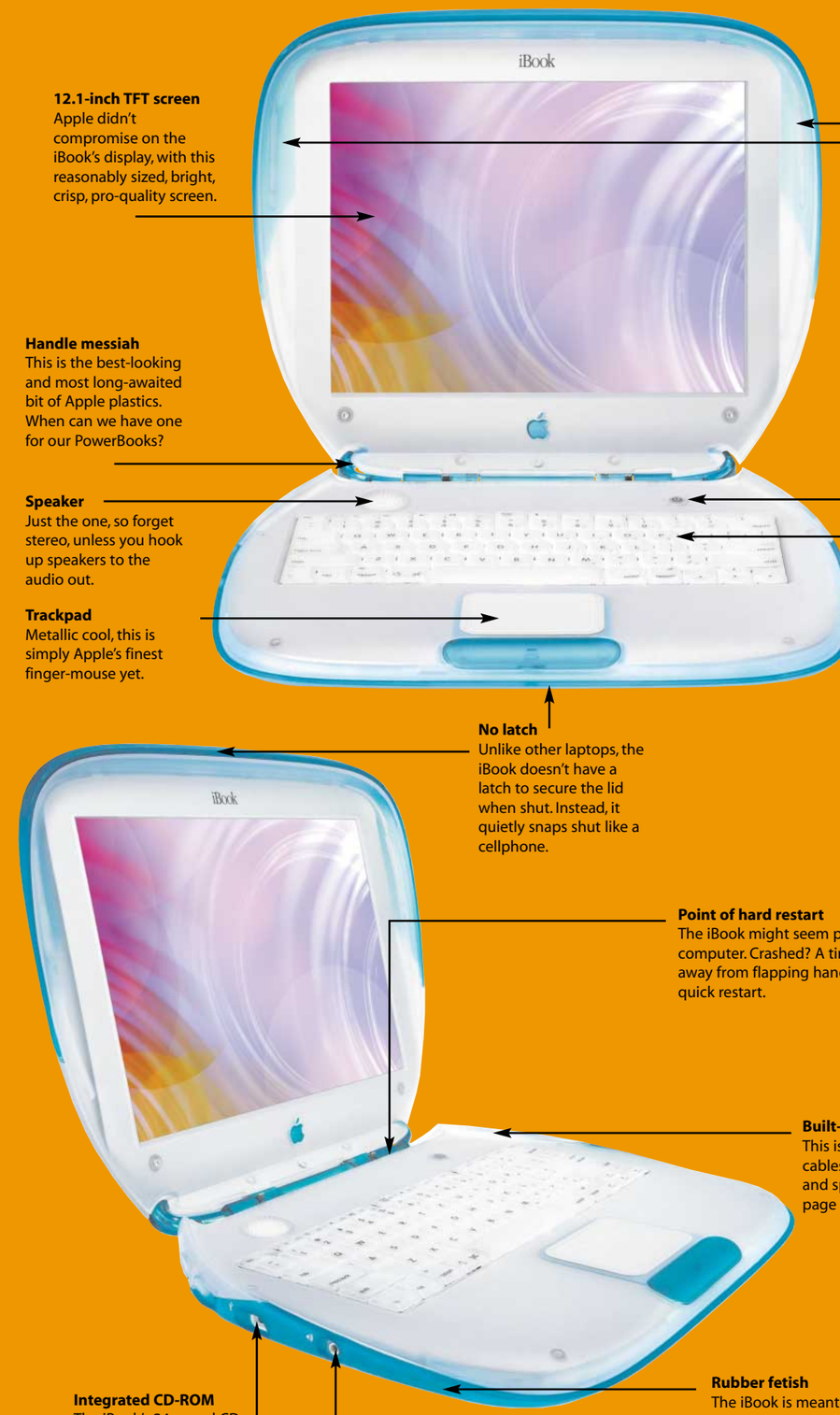
iBook 'em, Dan-o

Does the iBook rid the world of ethernet? Probably not – ethernet cables and hubs are cheap, and ethernet ports are built into every Mac, including the iBook.

But the iBook does usher in a world where wires are no longer mandatory – and where portable computers can roam free, without giving up the Internet one of the biggest reasons we use computers.

As more and more people attempt to bring their pre-Internet households into the networked age, as more schools have students taking their computers with them to class, the importance of wireless networking will be paramount. And it looks like Apple's beat everyone to the punch. MW

VISION THING ILLUSTRATION: JOHN RITTER



12.1-inch TFT screen
Apple didn't compromise on the iBook's display, with this reasonably sized, bright, crisp, pro-quality screen.

Built-in antennae
Cleverly hidden behind darker translucent plastics, the iBook is ready for wireless work, with the addition of just the AirPort Card and Base Station.

Handle messiah
This is the best-looking and most long-awaited bit of Apple plastics. When can we have one for our PowerBooks?

Power On
Just for the symmetry, turn your iBook on with real ease.

Speaker
Just the one, so forget stereo, unless you hook up speakers to the audio out.

Keys to die for
The iBook's full-sized keyboard is a translucent treat, with pre-set and customizable Function keys.

Trackpad
Metallic cool, this is simply Apple's finest finger-mouse yet.

No latch
Unlike other laptops, the iBook doesn't have a latch to secure the lid when shut. Instead, it quietly snaps shut like a cellphone.

Point of hard restart
The iBook might seem perfect, but is it still a computer. Crashed? A tiny button, hidden away from flapping hands, is your key to a quick restart.

Built-in functionality
This is where you plug in your cables: modem, ethernet, USB and speakers/headphones. See page 78 for detailed port photo.

Integrated CD-ROM
The iBook's 24-speed CD-ROM drive is not a removable option, meaning one less thing to break for schoolkids and rough adults.

Light fantastic
The AC adaptor jack lights up orange while the iBook is charging, and green when the battery is full. Neat.

Rubber fetish
The iBook is meant for consumers, not conscientious professionals who already have the PowerBook – so Apple has co-molded the tough plastics (which is bullet-proof anyway) with scratch-resistant rubber.

continues page<None>



For example, Jobs didn't mention those traditional PowerBook features that are absent from the iBook: a PC card slot and a microphone. Few customers will miss the PC card slot, since the most popular of the PC-card-type features (fast modem and ethernet) are built into the machine. As for the microphone: the iBook is not the machine to buy if you're in the habit of recording your baby's first gurgles using the mic built into the lid of a standard PowerBook.

But an Apple engineer did make a veiled reference to an upcoming add-on sound digitizer that will plug into the iBook's USB port. Another solution is from IBM, which reportedly is preparing a version of its ViaVoice headset that will connect to a USB port (see page 23).

The largest lack is that of a video-out solution, removed to keep the price-tag low. iBook owners who desire video out should look to the AverMedia USBPresenter, a USB-to-VGA interface that mirrors the computer screen to TVs and video displays for presentations. While USB is thought by many to be too narrow to support video, AVerMedia claims to have addressed the bottleneck with "advanced video compression technology to mirror and transfer image data."

The rest of the behind-the-scenes iBook story, fortunately, is all good news; as you peruse the laptop, you may helplessly and repeatedly utter, "Oh, wow." When the laptop is receiving power, its AC adaptor jack lights up in one of two colours: orange while the iBook is charging and green when the battery is full.



The translucent white keyboard is among the iBook's chief virtues, too. Not only is it full-sized and comfortable, but its keys lie where your fingers want them to, including the inverted-T set of arrow keys. Brilliant touches abound: the F1 through F6 keys control screen brightness, volume, sound muting, and Num Lock functions; you trigger their function functions (in other words, the F1 through F6 keystrokes) only when you're pressing the Fn key in the lower-left corner of the keyboard.

And get this: If you press F7 through F12, a dialogue box automatically appears, offering to launch a favourite program, document, or networked disk on subsequent presses of that key. (If you prefer, you can assign such icons within the Keyboard control panel instead – just drag any icon from the desktop onto the corresponding Fkey slot in the panel's Function Keys dialogue box).

There's no latch to keep the clamshell halves of the iBook closed; only spring-loaded hinge pressure keeps the machine shut, making the laptop much easier to open in a hurry. The machine can even be

continues page 80



Cable guys *Another "wow": the power cord itself is a masterstroke, featuring a retractable cord on a silver yoyo-like take-up reel that ends the hassle of tangled power cords forever. Even the flexi power plug (above) is Apple-branded and transparent.*



Ports *From left to right: 56Kbps modem, 10/100BaseT ethernet, USB, audio out. On the other side, next to the integrated CD drawer, is the iBook's AC adaptor jack – which, when receiving power, glows orange while re-charging, then green when the charge is full on the 12-inch-long battery.*



Battery buttons *The iBook's battery is protected behind tough translucent plastic. To change the battery, you turn two thumbscrews on the bottom of the laptop to open its battery panel. Apple claims you'll get an amazing six hours life out of your iBook without recharging.*



Light of life *The sleep-light indicator pulses green. It not only shows through in the handle area, but if the system is open and asleep, it follows through to the inside of the notebook, right below the screen. Traditional sleep-light indicators blink rapidly. With this new beacon lighting, you shouldn't have to "double-take" to see if it's asleep.*

Complaints, we've got a few…

If the overall response of the attendees at Macworld Expo with whom I spoke are any indications, the iBook is going to be a big hit, perhaps the best-selling new product in Apple's history. I give it good odds of besting the iMac's record setting sales.

The biggest complaints seem to be the amount of standard RAM, lack of a microphone, and the weight. The iBook ships with 32MB of memory. And although it's expandable (up to 160MB), I've heard several people complain that this "is barely enough to run the system software and one app." (For Apple's reaction to this complaint, see News, page 18.)

Another common gripe is the lack of a microphone. However, an Apple engineer has made a veiled reference to an upcoming add-on sound digitizer that will plug into the iBook's USB port. And though the iBook also lacks a PC card slot, I've heard surprisingly few moans about this since a modem and ethernet are built in.

Weighing in at 6.7 pounds, the iBook trumps the latest PowerBooks (5.9 pounds) in the weight department. Some Expo attendees think that's just too darn hefty. On the other hand, some feel this is just the price you pay for its tough rubber trim and "ruggedization."

Everything else about the laptop seems to be extremely well received.

Another beef is the iBook's missing video out capabilities.

"Many students and business people have to make PowerPoint presentations in classes and meetings," says Rik Nemanick of Saint Louis University. "One way to do this is via a live slide show, where you hook up your laptop to a video projector. I currently do this with my PowerBook 1400, but cannot with an iBook."

Other MacCentral readers hope that third parties will develop USB or Airport solutions to get around the problem.

– Dennis Sellers of MacCentral (www.maccentral.com)

set to wake up from sleep automatically when you open the lid, a terrific and obvious feature brought to you by the revamped Energy Saver control panel. (Other options in the new panel govern network reconnections when waking or sleeping).



This new Energy Saver control panel is not to be discounted: It, and the completely rewritten Power Manager software, are responsible for eking out Apple's claimed six hours of life from the sleek, silvery steel, 12-inch-long battery.

Another feature that's getting good buzz is the iBook's new power management features that beef up its energy conservation and battery power. It also lets it wake from sleep faster than previous Macs. According to Apple, new commands, available from the Energy Control Strip module, allow access to the following features:

- Sleep Now is the traditional form of sleep. When iBook is in Sleep Now mode, it must continually draw a small amount of power from the batteries in order to maintain the current information in RAM.
- In the Save and Sleep Now mode, prior to going to sleep, the system creates a single file of all the information contained in memory (RAM) at the time, and stores it on the hard disk.
- In Save & Power Off Now, the system again creates a single file of all the information contained in the computer's memory at the time, stores it on the hard disk and then powers off the computer. When Shut Down is selected form the Special menu, the computer powers off without saving the contents of the computer's memory.

The benefit of Save & Power Off Now is a significantly reduced startup time and the contents that were saved from the computer's memory are instantly restored.

The iBook ships with a nice software bundle that includes Mac OS 8.6, QuickTime, AppleWorks 5, Internet Explorer 4.5, Outlook Express 4.5, Netscape Navigator 4.5, America Online, FAXstf, Palm Desktop, World Book Encyclopedia, EdView Internet Safety Kit, Bugdom, and Nanosaur.

Maybe it takes the personal touch of a control freak like Steve Jobs to produce a machine whose fit, finish, and detailing is so rich and rewarding. (You can almost hear his voice when you consider the moment the iBook design team turned their attention to the traditional – and traditionally fragile – door that conceals PowerBook jacks: "Why do we need a flap? Why can't I just plug my cables directly in? Get rid of the flap!" And so there is, mercifully, no such door on the iBook).

As with the iBook's predecessor – the mega-hit iMac consumer desktop system– such maniacal dedication to perfection and a high coolness-quotient has paid off big time. Or, in the iBook's case, delightfully small time. MW





Make the upgrade

Why not make your old Mac hit G3-level speeds?

By Stephen Beale and David Fanning

As any serious Macintosh user knows, you can never have too much speed. That Power Mac 9500 that seemed so fast a few years ago, now looks like a slowcoach next to the latest Apple hardware. Fortunately, many of those older Macs were designed for easy upgrades: just pop in a new CPU card, add some software, and you can be blazing along at near-G3 speeds. And, thanks to the ingenuity of cardmakers, you can even turbocharge Mac models that aren't so amenable to a CPU upgrade.

continues page 84

Upgrading your CPU is not always a good idea. Although G3 upgrades will give you a speed boost, they're not cheap, and you won't get quite the same performance you'd expect from a spanking-new G3 system. However, there are many reasons why you might want to upgrade your old Power Mac, rather than buy a new blue-&-white G3 system.

For starters, you may have spent a fortune on RAM and SCSI drives, and you still want to leverage that investment. Or, maybe you're a video editor or publisher who still needs those expensive PCI cards in your six-slot Power Mac (the new G3 models have only three slots). Perhaps the thought of upgrading your serial and AppleTalk peripherals is just too daunting. If this sounds like you, you might be better off with an upgrade.

Still, there are reasons why a new G3 system might be a better choice than an upgrade. At any given CPU speed, a G3 upgrade isn't as fast as a new G3 system. There are several reasons for this, including the new G3's 100MHz system bus. Additionally, new computer systems take advantage of dramatic cost reductions in computer components. For about the same price as the fastest G3 upgrade, you can get an entry-level G3 system with plenty of RAM and storage. As a general rule, if you have a stand-alone Power Mac with few peripherals, consider getting a new Mac rather than upgrading.

If you have a stand-alone Power Mac with few peripherals, consider getting a new Mac rather than upgrading.

Which model?

The most important consideration is, which Mac model you want to upgrade. Apple has used a variety of Power Mac designs, each with its own method for upgrading the CPU. As a result, each G3 accelerator is designed for a certain range of Mac models. Upgrades are not interchangeable between Power Mac models, so shop carefully.

If you have a 680x0 Mac – that is, pre-PowerPC – you can forget about a G3 upgrade. The time is right for replacing these old models, as Apple has promised that its foundation for future OS development is the G3 and future processors. That 680x0 Mac is best donated to a charity or sold on an auction site.

Most G3 accelerators are designed for use with Power Macs equipped with a Processor Direct Slot. These include the Power Mac 7500, 9500, and 9600, as well as Macintosh clones from DayStar Digital, Power Computing, and Umax. Because these Macs were designed for easy CPU replacement, installing the cards is generally a simple matter. However, you may have difficulty fitting some of the cards in clones with low-profile enclosures. (Note that Apple does not guarantee compatibility with clones beyond System 7.x).

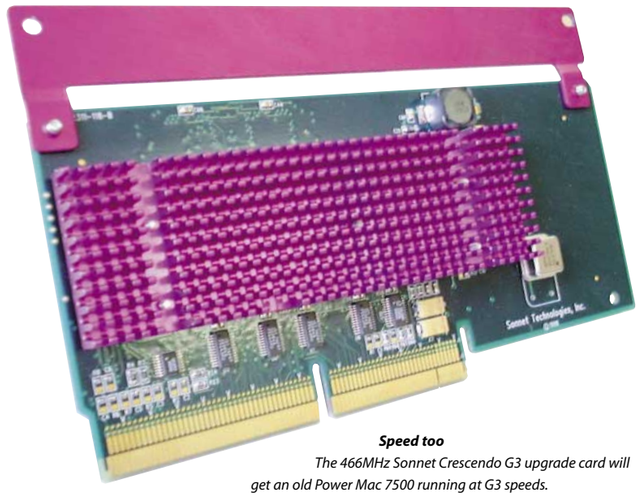
G3 Power Macs, with their Zero Insertion Force (ZIF) socket, are even easier to upgrade. If you own a first-generation G3 system, such as a 233MHz or 266MHz model, you can boost performance to 300MHz, 400MHz, or beyond, by adding a new G3 ZIF card.

Other Mac models are a bigger upgrade challenge. Some vendors offer G3 upgrades for NuBus Power Macs and some Macintosh Performas. The latter upgrades, designed for use with the Performa 6400, Power Mac 6500, plug into the L2 cache slot.

Along with these desktop Macs, you can also upgrade a number of PowerBook models, such as the PowerBook 1400, which is relatively easy to upgrade.

Here again, there are limits to the performance boost you can expect. In addition to using slow system buses, the PowerBook 1400 is limited to 64MB RAM.

continues page 86

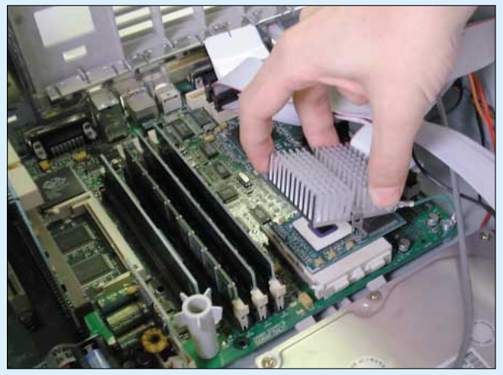


Speed too
The 466MHz Sonnet Crescendo G3 upgrade card will get an old Power Mac 7500 running at G3 speeds.

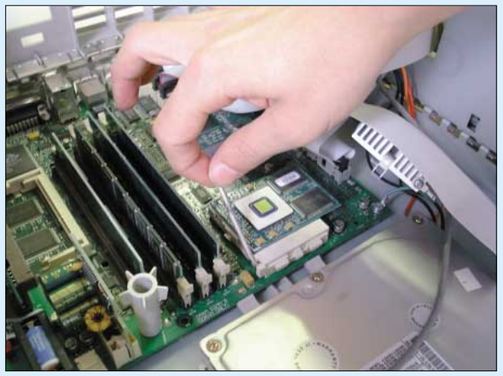
DIY guide to installing a ZIF-socket upgrade card



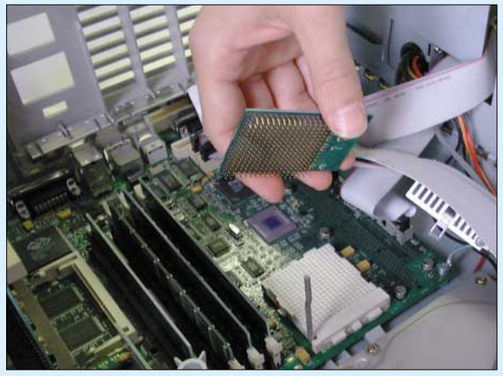
1 *When you open your machine, leave it plugged in – but with the power switched off at the socket. This grounds the machine and reduces static.*



2 *The thing that looks like a silver hedgehog is the heat sink. You'll need a screwdriver to unclip the restraining bar, and then to unscrew a small grounding cable.*



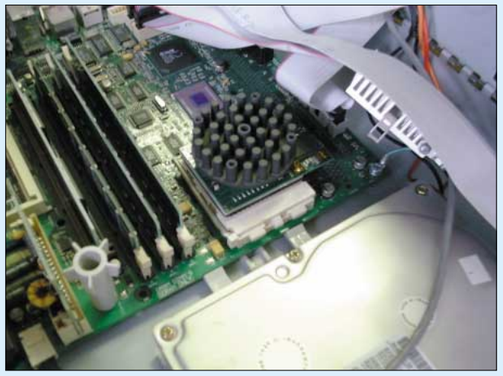
3 *To release the processor card, you must lift the lever on the side – this unlocks the pins on the bottom of the processor.*



4 *Lift out the processor and you'll notice a grid of tiny holes. One corner of the grid is missing a hole.*



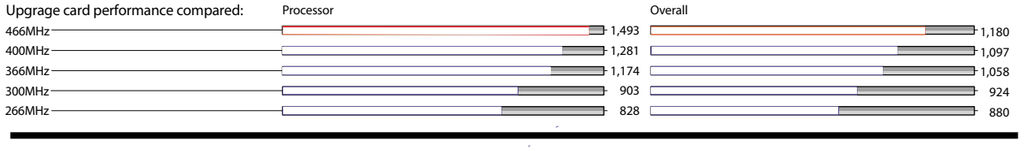
5 *The corner with the missing hole corresponds with a missing pin on the processor. This helps you to get the card in the correct way around.*



6 *Once the lever is down, you're all set. You can double your processor speed in under 10 minutes.*

Upgrade cards: the acid test

Best results in test. Longer bars mean better speed or overall performance.



Behind our tests

All the cards tested were put in a Power Macintosh 8500. The machine was not reformatted, as we would normally do for speed tests. Instead, we left it with it naturally fragmented disk for a realistic upgrade experience. The speeds shown are split into two for each upgrade card. The first bar is purely for the processor speed, taking no account of other speeds, such as disk or graphics. The second bar shows the overall effect of the upgrade, when disk and graphics speeds are taken into account.

G3 upgrade cards: what's what

COMPANY	PRODUCT	PRICE	CONTACT	PHONE
Formac	G3 ZIF 366MHz	£359	Formac	0181 533 4040
Formac	G3 ZIF 400MHz	£449	Formac	0181 533 4040
Formac	G3 ZIF 450MHz	£509	Formac	0181 533 4040
MacTell	PowerJolt G3 333/1MB	£355	Channel Dynamics	08706 070 540
MacTell	PowerJolt G3 366/1MB	£419	Channel Dynamics	08706 070 540
Mactell	PowerSoft OverDrive 366MHz/1MB	£355	Channel Dynamics	08706 070 540
Mactell	PowerSoft OverDrive 400MHz/1MB	£499	Channel Dynamics	08706 070 540
Mactell	PowerSoft OverDrive 466MHz/1MB	£549	Channel Dynamics	08706 070 540
Newer	MAXpowr ZIF G3 300MHz/1MB	£385	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr ZIF G3 366MHz/1MB	£460	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr ZIF G3 400MHz/1MB	£540	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr ZIF G3 466MHz/1MB	£610	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr PDS G3 300MHz/1MB	£329	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr PDS G3 366MHz/1MB	£460	AM Micro	01392 426 473
			IMC	01344 871 329
Newer	MAXpowr PDS G3 400MHz/1MB	£540	AM Micro,	01392 426 473
			IMC	01344 871 329
PowerLogix	PowerForce G3 300/1MB	£ 367	Channel Dynamics	08706 070540
PowerLogix	PowerForce G3 400/1MB	£ 525	Channel Dynamics	08706 070540
PowerLogix	PowerForce G3 466/1MB	£ 695	Channel Dynamics	08706 070540
PowerLogix	PowerForce ZIF G3 466/1MB	£ 549	Channel Dynamics	08706 070540
Sonnet	Crescendo G3 300MHz 1M L2	£349	Computers Unlimited	0181 358 5857
Sonnet	Crescendo G3 333MHz 1M L2	£399	Computers Unlimited	0181 358 5857
Sonnet	Crescendo G3 400MHz 1M L2	£499	Computers Unlimited	0181 358 5857
Sonnet	Crescendo G3 466MHz 1M L2	£569	Computers Unlimited	0181 358 5857
XLR8	MACh Speed G3Z 300MHz/1MB	£399	Interex Europe	01923 266 400
XLR8	MACh Speed G3Z 333MHz/1MB	£469	Interex Europe	01923 266 400
XLR8	MACh Speed G3Z 366MHz/1MB	£499	Interex Europe	01923 266 400
XLR8	MACh Speed G3Z 400MHz/1MB	£579	Interex Europe	01923 266 400
XLR8	MACh Speed G3Z 450MHz/1MB	£699	Interex Europe	01923 266 400
XLR8	MACh Carrier card	£189	Interex Europe	01923 266 400
XLR8	MACh Speed ZIF 300/1MB	£339	Interex Europe	01923 266 400
XLR8	MACh Speed ZIF 333/1MB	£399	Interex Europe	01923 266 400
XLR8	MACh Speed ZIF 366/1MB	£419	Interex Europe	01923 266 400
XLR8	MACh Speed ZIF 400/1MB	£499	Interex Europe	01923 266 400
XLR8	MACh Speed ZIF 466/1MB	£749	Interex Europe	01923 266 400

The specs

Most G3 upgrades are identified by three numbers following the model name: 300/512K/150, 400/1MB/200, and so on. The first number refers to the CPU speed in megahertz; this is the key performance spec. The second number refers to the size of the backside cache, an area of high-speed memory that's used to store frequently accessed data. Most cards include either 512K or 1MB of backside cache. A larger backside cache is helpful when running emulation software, such as a Windows emulator or Connectix's Virtual Game Station. The third number refers to the speed at which the CPU communicates with the backside cache. The faster the cache bus, the faster your CPU can chew on the bits.

With some cards, you can boost performance even further by upping the CPU speed (overclocking) or boosting the cache bus speed. This is not always a good idea because it can lead to frequent system crashes, and can also cause premature failure of some components. You can test your system's ability to handle the higher speeds by running Apple's Graphing Calculator – or appropriate software – in demo mode overnight. If your system is still running in the morning, it's likely you'll get away with overclocking. A few cards have automatic sensing features that prevent you from using cache speed settings that won't work.

A recent innovation from XLR8 is the Carrier Universal Upgrade Adaptor, an upgrade card for Processor Direct Slot-Macs that includes a ZIF socket for the G3 chip. This makes it easy to "upgrade the upgrade" – when faster chips are released, you can replace the chip, rather than the whole card. You can also use this upgrade card to install an existing G3 chip from another upgraded Mac.

Compatibility

If you try to upgrade a pre-G3 Power Mac, you may encounter incompatibilities related to architectural differences between Power Mac G3's and older systems. Vendors have released software that fixes the most serious problems, but some compatibility issues remain. For example, you may notice display artifacts due to conflicts with the Power Mac's built-in video. The only remedy in this case is to install a PCI graphics card. Also, Apple won't guarantee that Mac OS X and its successors will run on older Power Macs – with or without G3 upgrades. If your Mac didn't come from Apple with a G3 processor already installed, Apple isn't making any promises. Maybe you'll be able to run the future Mac OS on a older system that's upgraded to G3 – but don't count on it.

Buying factors

Numerous manufacturers offer G3 upgrades, each with its own software and card designs. But, because they all get their chips from the same suppliers – IBM and Motorola – there are no huge quality or performance differences among the cards. One vendor's 300MHz card may be easier to install than another's, but both cards will offer similar performance. As a result, price, warranty, and service are the most important factors when choosing a G3 upgrade.

This is a competitive market, and vendors are continually introducing faster upgrades, as speedier G3 chips become available. Typically, the first upgrades at a given speed, such as 466MHz, are prohibitively expensive, but prices tend to fall rapidly as even-faster chips emerge. And, as the differences among the cards are minimal, vendors have tend to keep their prices in line with the competition. If one vendor its prices, the others will most certainly follow. MW

Card-carrying solutions

One of the things that makes upgrading a potential money waster is not using the processor you are replacing. If you have an original 233MHz G3 for example, you can double the processor power by installing a 466MHz ZIF card. But wouldn't it be nice if you could use the 233MHz G3 processor in an even older Mac. Well those boffins at XLR8 have come up with the perfect solution, a PDS daughter card with a ZIF socket attached.

This means that older Macs such as the 7500, 8500 and 9500 series can use your cast-off processors. This could be the excuse you were waiting for to upgrade your Mac, and be able to share the wealth of processing power with your colleagues. More good news is that even if you don't have an XLR8 upgrade, you can buy the carrier card without a processor. It will work with most other brands of upgrade card, but it is best to check with XLR8 first.

This is such a good, and obvious, idea that other companies are sure to follow. Newer Technology is apparently working on something similar. So if you are low on the IT food chain, tell your seniors about the great new G3 upgrades available and reap the second-hand benefits.

Burning desire

CD mastering and DVD archiving has been demystified. **By David Fanning**

The Compact Disc was invented in 1965 and, although it has evolved relatively slowly, it's now the most popular storage media on the planet. Billions of megabytes of music, data and video are stored on compact discs, and just about all personal computers are capable of reading CD-ROM contents. More recently, emerging technology letting us write our own CDs has liberated a once highly expensive and time-consuming task. This month, we examine the current batch of CD and DVD writers for both SCSI and USB Macs.

It wasn't long ago that the mere ownership of a CD-R was something that could form the basis for a business. The arcane art of mastering CDs was something of a mystery to the general public. Even making backup archives was thought to require a certain amount of wizardry. In those days, digital duckers and divers would offer to archive office data for a £200 per disc. It must have been a real money-spinner.

More recently, the software available has been as much of an influence on the market as the faster and cheaper hardware. Adaptec's Toast made the arcane art of mastering CDs into a mainstream activity; making CDs is now child's play. Backup software has also simplified the act of using CDs as an archive media. Dantz's backup Retrospect now works with all CD-Rs as easily as it used to with floppy disks.

When we looked at the range of CD-Rs and CD-RWs, tests were limited to single CD-R units. For more serious duplication, there is a range of multiple-CD-R boxes that can record or duplicate two, four, or more discs at once.

Duplication machines can often be set up as stand-alone products, without the need to hook-up to a computer. Simply insert the original in one drive, fill the CD-Rs with blank discs and go off and make a cup of tea. The machine does the rest – so by the time you've finished your cuppa, the disc will have been duplicated.

Most of the machines we looked at were 4x or faster, with the exception of the USB models. Some of these use a 2x mechanism, because it's difficult to make USB fast enough for 4x.



There are, of course, other storage options. Jaz and Zip drives are popular, as are other optical-disc formats. The closest to the functionality of the CD, though, is the DVD-RAM drive. DVD is essentially a Compact Disc format, and in most ways it represents the next generation of CD. More and more machines are shipping with DVD-ROM drives, though they are not as all-pervasive as the CD-ROM yet. Remember though, CD-ROM took almost five years to catch on, even with a giant multimedia industry pushing it forward. But I have no doubt that DVD will replace CD-ROM sooner rather than later.

In storage terms, DVD is a different animal from CD-R. The biggest difference is the cartridge that DVD-RAM uses to protect the disc. This precludes DVD-RAM from being widely compatible even with

continues page 90

Editors' Choice

Que! Drive USB CD-R

Macworld Rating ★★★★/8.9

The Que! Drive USB CD-R comes with Toast, has iMac-styling and boasts 4x CD recording. It's twice the speed of its nearest USB rival, and it's cheaper too. For good measure, it also has a rather splendid carry case.



Boxing clever
The Box Clever ReMix offers the ultimate in flexibility – a DVD-RAM and CD-RW in one box.

DVD-ROM drives. In the near future, DVD-RAM drives will be able to record on naked DVD-RAM discs that will be readable by normal DVD drives.

This really opens up the possibilities for DVD-RAM, because once the disks are readable by relatively low-spec machines with DVD-ROM drives, it becomes a much more flexible storage system.

It took CD-ROM drives as standard to make the format really take-off in PCs. I expect that by next year, all Apple machines will ship with DVD-ROM as standard.

Pirates ahoy

Sony has already suffered from the plethora of CD-R machines that are now available. Both the Sony music division and the Sony PlayStation have felt the effects of piracy. So, the company that did so much to promote CDs is now becoming a victim of its own success.

For the record, you can use all of the machines tested to reproduce audio and PlayStation games. You're allowed to make the equivalent of backups of audio discs for your own use, and Toast makes this very simple. This is a similar prospect to making MiniDiscs, and Sony shouldn't worry about this kind of personal use. PlayStation discs, though, are a different matter: they are both difficult to copy (no, I won't tell you how), and Sony goes to great lengths to stop you doing so. It is, in theory, still legal to make a backup of your PlayStation software for personal use, but your PlayStation needs to be modified to read the "backup" discs. This puts you in decidedly murky territory and I, for one, wouldn't wish to take on Sony in court. The price of PlayStation games has come down recently. So you don't need to "steal" them – just buy them.

If you're looking at buying a CD-R to make music CDs (for your own personal use) you're making a good choice. The sound quality of a copied CD is exactly the same as the original, whereas the sound quality of MiniDisc is lower. This is because MiniDisc uses a higher compression algorithm – to squeeze the music on to a smaller disc. If you really want to shoehorn more music onto a CD, then record in MP3 format. You will be able to get ten or more CDs of music on to a single CD. You won't be able to play the songs through your conventional CD player, but you can always hook up your computer to your stereo.

The other optical formats fill a rather different role for computer users. Both the 3.5-inch and the 5.25-inch optical disk formats use discs in cartridges. These are not CDs or DVDs, they are rewritable and they are usually fast. People who need fast, large format storage will continue to use optical discs – such as those in the video-production industry – because it can offer the same capacity as DVD-RAM, only faster. The smaller, slower optical disks still have a role as cheap rewritable storage, suitable for archiving. They do now have competition from CD-RW, so are not as relevant as they once were – but the cartridge format means they are protected from the elements and, because of this, are a safer bet.

Another widely used format for archiving is the tape drive. Tape drives come in various types, with capacities of up to 25MB per tape. This makes them economical for large amounts of data. The drawback of tapes is that they don't act like normal media. You can't mount a tape on your desktop to see what is there, and must choose files to be restored. This makes it difficult to restore, say, an XPress page and its contributing files without merely restoring the whole volume. This is also a time-consuming process, normally done by an IT person, because it's most often performed as a server backup. I'm not saying this mode is unsatisfactory, just that it's cumbersome and very un-Mac-like. But if backing up your whole network is what you want, tape is the way to do it.

The models we tested fall into three categories: CD-Rs, CD-RWs and DVD-RAM.

CD-RWs have all the features of a normal CD-R, plus the ability to use re-writable CD media. This means that if you need to go back to an archive of your work and make a change, you can do it without burning a fresh CD.

The usual drawback is that the CD-RW machines are often comparatively slow. Until now, it's been case of trading-off between the flexibility of CD-RW and the speed of a simple CD-R. There are many reasons for buying a CD-R: archiving, sharing files, multimedia-mastering, music – and, of course, piracy. The most important characteristic of any machine is speed – something that's easy to measure. Speed is measured in multiples of a single-speed CD-R. It takes 74 minutes to record a full 650MB CD on a single-speed machine. A 2x machine takes 37 minutes to record the same amount of data; 4x machines can do it in 18.5 minutes; and an 8x can manage it in just over nine minutes. At present, 8x is the fastest a CD-R will go – but watch this space. Remember, CD-ROMs were reported to have topped the speed stakes at 24x – but shortly afterwards, 32x and 48x models were released. The problem with making CD-Rs faster is increasing the accuracy of the laser. CD-Rs will get steadily faster, but for now, just get the fastest one you can afford.

DVD-RAM is not just a method of archiving data, though it does this very well. It can also read just about every available format of CD, including CD-RW and DVD-Video disks. This makes it an ideal addition to companies that need wide compatibility with optical standards.

Testing times

To test the CD-Rs, we took a full disc and measured the time it took to reproduce it from a disc image. This takes slightly longer than you may expect, because data-recording is not all that happens. When a CD is recorded, a constant stream of data is laid onto the disc but when the end of the data is reached the CD needs to be finished. This can take a few minutes extra, while the CD records items such as the desktop database, so the time taken to finish a CD varies.

In the table, the speeds of the models are shown in x speeds. This represents how much faster than a single speed CD the machines are. For example, if a drive has a speed of 6x4x16x, the 6x is the speed for recording CDs, 4x is the speed of recording on CD-RW media and the 16x is the speed of reading either.

The software included with a CD-R is easily as important as the hardware. The current cream of the crop is Toast 3.8 from Adaptec, which has brought unparalleled ease-of-use to CD-mastering. For a while, it was without competition, but now there is a new player from Anubis, called Discribe. You will find it bundled with the Sony Spressa, and it shares much of the features of Toast. The interface is not as simple to use, however, and offers nothing that Toast doesn't.

If you're not already familiar with Toast, it's simplicity itself to use. Simply drag-&-drop files, folders, or volumes onto the open document and write the CD. It will default to a Mac volume, but it is just as capable writing hybrid Mac/PC discs, audio discs or any of the other CD formats that are used. To make audio CDs you simply drag each track to the application. If you're making a compilation CD you can extract the audio files from a CD to your hard drive. If you can't afford the space this demands, it'll prompt you to change the audio CD at the appropriate moment. Toast 3.8 is the first version of the software to support USB, so it is supplied with the Que! and the La Cie CD-Rs.

Adaptec recently announced Toast 4 Deluxe with a host of new features. Check out the review in next month's *Macworld*. The new features include great new audio capabilities, such as MP3-to-CD, and disk at-once recording. It also includes CD Spin Doctor, an application that helps transfer old vinyl records, but without the scratches and hissing. If you like, though, you can leave some of this noise in for that "authentic" vinyl sound. Users will also have access to CDDB's unique Disc Recognition Service, where artist, album and song title information are automatically available for use, eliminating the need for users to manually type in titles.

If you're a professional musician, Adaptec has another application designed to make mastering original audio CDs as simple as copying one. Making master CDs for mass duplication is a little more structured than making a CD for your own amusement. Strict guidelines must be adhered to, ensuring that the end-product will play on everybody's CD player. The product is called Jam, and after a quick butcher's at the manual, you'll be cranking out your own CD masters, and saving yourself a fortune.

Choosing a solution

DVD-RAM is set to take off, despite a slow start. Now there are more vendors with DVD offerings, the competition is driving prices down a little. At present, Panasonic is the only company to offer the mechanisms for resellers. Unsurprisingly, the performance of all the models tested was identical. This gives you the opportunity to shop around for the best price. Currently, La Cie offers the least expensive DVD-RAM drive, but the Box Clever ReMix DVD-RAM/CDR offers a CD-R in the same box – for just £100 more. On the value-for-money stakes, this scores highly.

Selecting the best solution for your CD-R needs should be straightforward. First of

continues page 92



Burns might
The 8x Box Clever Teac CD-R gives alot of speed for its attractive price tag of just £249.

Glossary

CD (Compact Disc). Usually means audio CD but is a blanket expression for uncartridged 5.25-inch optical discs, including DVD-ROM and CD-ROM.

CD-R (Compact Disc recordable). For recording CD-ROMs and CDs.

CD-ROM (Compact Disc read-only memory). CDs that hold data.

CD-RW (Compact Disc re-writeable). An erasable recordable CD.

DVD (Digital Versatile Disc). Describes any disc using multi-layered memory on a CD.

DVD-RAM (Digital Versatile Disc Random Access Memory). The data-flavoured DVD, re-writable and in a cartridge.

DVD-Video (Digital Versatile Disc video). DVD made especially for video data, not recordable and not within a cartridge.

CD-R, CD-RW, DVD-RAM: how fast, how much

COMPANY	PRODUCT	STAR RATING	PRICE	SOFTWARE	INTERFACE	SPEED	CONTACT	TELEPHONE
Compu b	Que! DVD RAM	★★★★/8.0	£559	Tune Up/Carry case	SCSI	NA	Compu b	0800 018 6625
Compu b	Que! CD-RW	★★★★/8.9	£239	Adaptec Toast/Carry Case	USB	4x2x8x	Compu b	0800 018 6625
Image Store	Yamaha CD-RW	★★★★/7.5	£279	Adaptec Toast	SCSI	4x4x16x	Image Store	01635 297 297
Image Store	Panasonic DVD	★★★★/8.1	£475	Tune Up	SCSI	NA	Image Store	01635 297 297
Image Store	Teac CD-R	★★★★/8.6	£293	Adaptec Toast	SCSI	8x20x	Image Store	01635 297 297
Box Clever	Remix DVD/CDR	★★★★/8.5	£599	Tune Up/Toast	SCSI	NA	Mac & More	01442 870300
Box Clever	Panasonic CD-R	★★★★/8.8	£239*	Adaptec Toast	SCSI	8x20x	Mac & More	01442 870 300
Box Clever	Teac CD-R	★★★★/8.8	£249*	Adaptec Toast	SCSI	8x24x	Mac & More	01442 870 300
La Cie	CD-RW	★★★★/8.1	£349	Adaptec Toast	SCSI	8x2x20	La Cie	01280 821 400
La Cie	DVD-RAM	★★★★/7.7	£499	Tune Up/Toast	SCSI	NA	La Cie	01280 821 400
La Cie	USB CDR	★★★★/7.8	£230	Adaptec Toast	USB	2x2x6x	La Cie	01280 821 400
Sony	Spressa	★★★★/7.7	£255	Sony Discribe/Retrospect Express	USB	2x2x6x	Sony	01932 816 660
Mitsubishi	CD-RW	★★★/6.9	£270	Adaptec Toast	SCSI	2x2x6x	Action	0800 333 333
Yamaha	CD-RW	★★★★/8.5	£203	Adaptec Toast	SCSI	4x4x16x	Yamaha	01908 369 259
Yamaha	CD-RW	★★★★/8.5	£229	Adaptec Toast	SCSI	6x4x16x	Yamaha	01908 369 259
Freecom	CD-RW	★★★★/8.5	£199	Adaptec Toast	SCSI	4x4x20x	New Century Computers	0181 5666 668

*For a limited period only

No toast

The Sony Spressa is a perfectly good USB drive, but it doesn't come with Toast, which is a drawback.



all, if you own an iMac, you have three choices: La Cie, Que! or the Sony Spressa. The Sony Spressa is a perfectly good drive, but it doesn't come with Toast. The software that it does use, Sony Discribe, isn't bad, but it lacks the elegance of Toast. Maybe Sony chose not to use Toast, because you can use Toast to duplicate Sony PlayStation discs. However, unless you're offered the Sony Spressa at a great price, Toast would sway me towards another machine. The La Cie and Que! Drive CD-Rs do come with Toast, but the Que! drive has the edge in a couple of ways. First, it's translucent blue and curvaceous, making it an ideal partner for the iMac or the G3 Power Mac. More importantly, under the hood is a CD-RW, boasting 4x CD recording. This is twice the speed of the La Cie or Sony – and it's cheaper too. Wrap that up with a smart carry case and we have a winner for the USB section.

For SCSI-based CD-Rs you need either an older machine that has SCSI, or a new G3 with a SCSI card. SCSI-based CD-Rs are considerably more stable than their USB counterparts, and higher speeds can be achieved. If speed is the name of the game for you, and money is no object, the 8x is the fastest CD-R currently available. There are 8x CDRs available from Mac and More, La Cie and Image store. All the 8x models perform the same, so it's safe to choose the best-value model. Currently, Mac & More is offering the best deals for 8x models. The Panasonic-based 8x is £239, and the Teac 8x – with a faster reading speed – is £249 for a limited period at Mac & More.

If you would trade speed for a better price and added functionality, then the Yamaha CD-RW has a 4x speed CD-R function and writes CD-RW discs at the same speed. Current prices for the Yamaha CD-RW are around £200, which is incredible value.

If just being able to write CDs is not enough for you, the ReMix from Box Clever combines a DVD-RAM drive with a fast CD-R in the same box. This makes it incredibly versatile, and ideal for archiving data in either format. If you need both CD-R and DVD-RAM, getting them in the same box will also save you money.

Whatever kind of CD-R or CD-RW you choose, you're guaranteed compatibility for some time to come. Even when CD drives are phased out and replaced with DVD drives, CDs will remain compatible. Consider that CDs were around when the largest removable media was a 44MB SyQuest disk – and that CDs are still compatible with just about all computers. CDs have up to ten years before their backwards-compatibility wanes.

So – more than most other computer peripherals – there will still be a use for your CD-R long after the latest storage fads have fallen by the wayside. MW

create print

Tag – you're IT

Using codes to format text can relieve boredom. **By David Blatner**

Everything in the good old days was better, right? Take typesetting, for example. From the early 1970s until desktop publishing took off in the early 1990s, typesetting was done on a computerized compositor. It was a lot like hand-coding HTML today – you formatted text with codes such as <*cp>, <*cf>, and <*il>. It sounds cumbersome, but as long as you remembered all those codes, you could knock off pages and pages of formatted text.

Actually, I wouldn't go back to those old days for anything – I like today's WYSIWYG typesetting. Still, every so often I long for the power of codes. Fortunately, QuarkXPress gives you the option of using typesetting codes for heavy-duty text processing – via a little-known feature called XPress Tags. If you use QuarkXPress to create anything longer than a small pamphlet, you'll find Tags useful.



RACHEL OKLEY

What are they?

XPress Tags are basically HTML-like codes that tell QuarkXPress how to format text – created in QuarkXPress or imported from a text editor, word processor, spreadsheet program, or database. The codes range from simple (<B> for bold, <I> for italic, <U> for underline) to complex – <*t(36,0,"1")> to place a basic tab stop at 0.5 inches.

To see text in a QuarkXPress document described with XPress Tag codes, you need to export it out of QuarkXPress. To do this, select the text, choose Save Text from the File menu, and open this file in a text editor or a word processor (see "XPress Tags prep course").

Why use them?

There are several great reasons to use XPress Tags. First, you can perform complicated search-&-replace operations on your text – say, replace every regular tab with a right-align tab (see "Project 1: Massage the table of contents"). You can also format text imported from a database or a spreadsheet, even if your database or spreadsheet software doesn't support formatting (see "Project 2: Format imported data").

Additionally, you can alleviate some of the tedious tasks you previously would have done by hand, such as horizontally scaling em dashes to 75 per cent. Even someone using an old PC or Unix machine that supports only unformatted ASCII text can assign formatting – including style sheets – to a file, and the formatting shows up when you import it into QuarkXPress.

On the following pages are several XPress Tags projects that make laborious tasks quicker and easier. You can also find two additional projects on Macworld Online: one for quickly converting capitalized text to small-caps style, and one for creating tables with alternating tints in QuarkXPress (see **www.macworld.com/1999/08/create/**).

Keep in mind that XPress Tags control only text formatting: Anything you can do to text in QuarkXPress using menus and dialogue boxes, you can also do using codes. But XPress Tags can't help you with page layout or with graphical elements, such as images and lines.

The most common use for XPress Tags is for performing a search-&-replace that's too sophisticated for QuarkXPress's Find/Change command. To perform specialized tasks, sometimes you need a combination of tools to aid you.

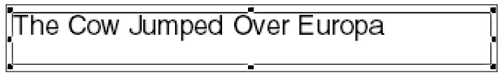
For instance, let's say you have a 15-page table of contents and you want to change the typeface for the numerals only. Usually you can't tell most programs to look

continues page 100

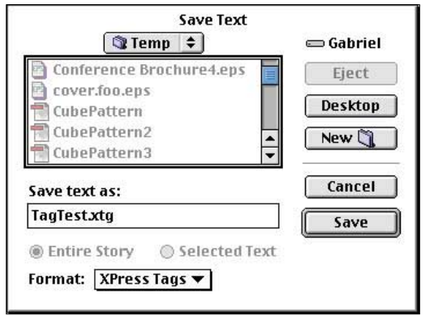
XPress tags prep course

The best way to learn to use XPress Tags is to export some text in the XPress Tags format and examine it. At first, the codes may look intimidating, but with a little practice, you'll start to understand them. Here's where to begin.

1 In QuarkXPress, select the Content tool and click in a text box, or highlight the text you want to export, then choose Save Text from the File menu, or press ⌘-option-E (see right, top).



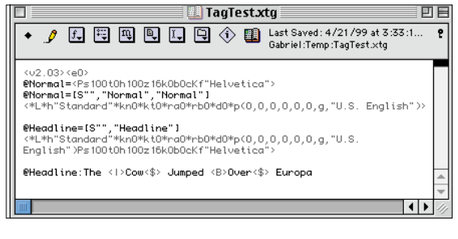
2 Choose XPress Tags from the Format pop-up menu, give the file a name, and click on Save (see right, second top).



3 Now open the file you've just saved in a text editor or word processor – you can also re-import it into QuarkXPress using the Get Text dialogue box, but make sure you turn off both check boxes in the Get Text dialogue box (see middle, right). The first line of the tags simply tells QuarkXPress which version and language of XPress Tags you're using. You can usually ignore this.

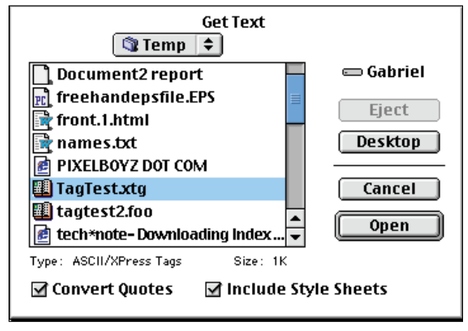
Lines beginning with @stylenamehere= are style-sheet definitions. When you export XPress Tags, the program always includes them, but you can omit them if you're writing your own tags for style sheets you've already defined in QuarkXPress.

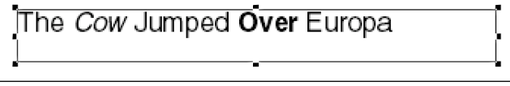
Lines beginning with @stylenamehere: tell QuarkXPress to apply this paragraph style sheet to the paragraph. The tag <@stylenamehere> applies a character style. To return to the regular character style, use <@$p>. As with HTML, you can imbolden text with <B> or italicize it with <I>. Unlike HTML, these tags are case-sensitive, and to turn off boldface or italics, simply type <B> or <I> again – it's like a toggle switch – or type <$> to return to Normal style formatting. Once you get the hang of these basics, you can delve into the more complicated and powerful tags. Download a full list of XPress Tags from **www.macworld.com/1999/08/create/**.



4 After making changes to the tags and saving the file, import the updated file into QuarkXPress using the File menu's Get Text (⌘-E). In the Get Text dialogue box, if you check both the Convert Quotes and Include Style Sheets check boxes, the program interprets the tags and displays the formatted text (see bottom right). If you have both check boxes unchecked when you import the text file, QuarkXPress imports the tagged file and leaves the tags as text instead of interpreting the codes.

Specifically, the Include Style Sheets check box determines whether QuarkXPress interprets the codes. However, if you're importing a tagged file as text and you convert straight quotes to smart quotes, you'll mess up the codes – just like HTML, XPress Tags require straight quotes to work. It's a good idea to get into the habit of turning both check boxes on or off.





What you need

- QuarkXPress
- Text editor or word processor

Optional:

- Search-&-replace utility; FileMaker Pro; Microsoft Excel

just for numbers – but the right tool makes this possible. In this case, you could export the contents in XPress Tags format and then use a text editor, such as Bare Bones Software's £89 BBEdit (see this month's cover disk; Digital Toolbox, 0181 961 6622) – or a word processor, such as Nisus Software's, **www.nisus.com**, £109 NisusWriter (Softline, 0181 401 1234) to do the search-&-replace.

Another tool is Greg Swann's $50 shareware utility, Torquemada the Inquisitor (featured on this month's cover disk). Torquemada can perform very complex wild-card searches – for example, it can search for any letter followed by any punctuation, and apply 20 units of kerning to spread them apart. It uses its own obscure codes for this – for instance, ^± finds any single letter, ^# finds a number, and so on.

Learning how to use these tools can be even more complex than learning how to use XPress Tags, but if you do a lot of work on long documents, it's worth the time and effort up front to save yourself future hassles. If you decide to go deeper into the complexities of XPress Tags, also check out Em Software's **www.emsoftware.com** £175 XTags XTension (Digital Toolbox, 0181 961 6622), which lets you do even more with codes – including importing anchored text and picture boxes.

The joys of control

While only a die-hard code-loving Unix user would really want to go back to the old days of typesetting, there are times when code-based typesetting is handy. XPress Tags let you take advantage of the best of both worlds – fine control over type manipulation, and WYSIWYG controls.

If you're just learning to use XPress Tags, experiment with the given examples to get up and running. It doesn't take long to format text properly when you dive into the precise world of codes. MW

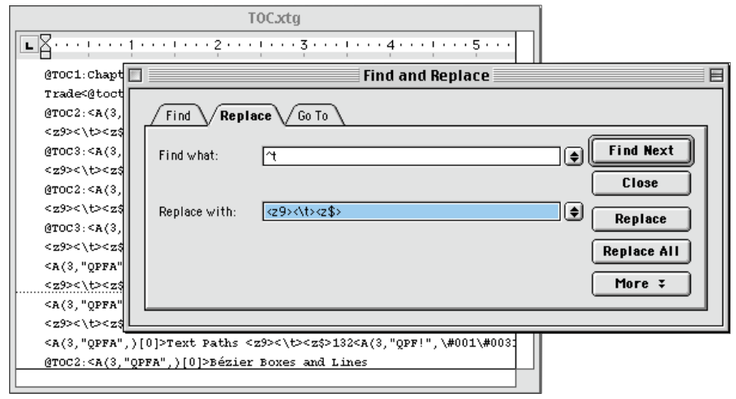
David Blatner is the author of *The QuarkXPress 4 Book* (Peachpit Press, 1998).

continues page 102

Project 1: Massage the table of contents

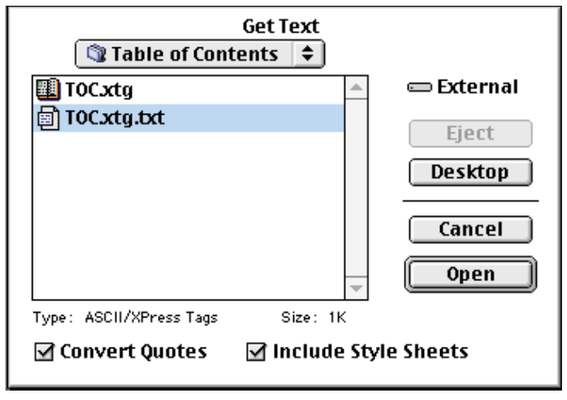
Let's say you have a 20-page table of contents you need to wrestle into shape quickly. Maybe you want to replace every regular tab with a right-align tab , which always aligns on the right margin – and make the tab leader characters smaller by reducing the tab character. Here's how.

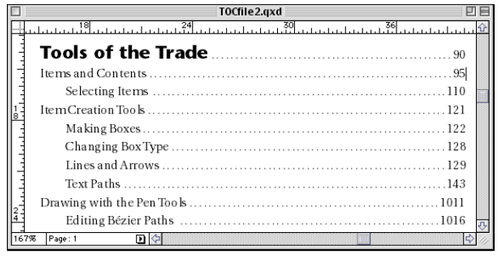
1 Export the table of contents as XPress Tags and open it in a text editor, such as BBEdit or SimpleText, or a word processor, such as Microsoft Word or NisusWriter. If you use Word 98, open the XPress Tags file by pressing ⌘-O and choosing Recover Text From Any File from the List Files Of Type menu in the Open dialogue box. This will ensure that all codes appear as text and are not interpreted by Word (see top right).



2 Search for all the tab characters (^t), and replace them with the codes <z9><\t><z$>. This sets the size to 9 points, inserts a right-align tab, and then sets the text back to the original size. In BBEdit, search for <\t> and replace it with <\\t> – this changes all regular tabs to right-align tabs.

4 Save the file – make sure it's still text only– and re-import it into QuarkXPress via the File menu's Get Text command. In the Get Text dialogue box, make sure you have the Include Style Sheets and Convert Quotes check boxes selected (see bottom right).





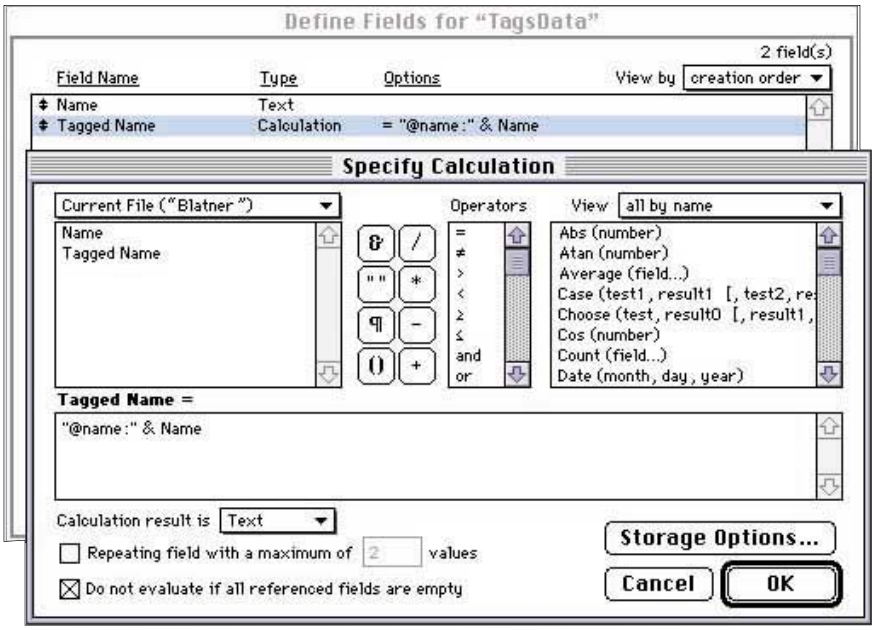
Final product
With the help of XPress Tags, I improved alignment and made smaller tab characters (dots).

media

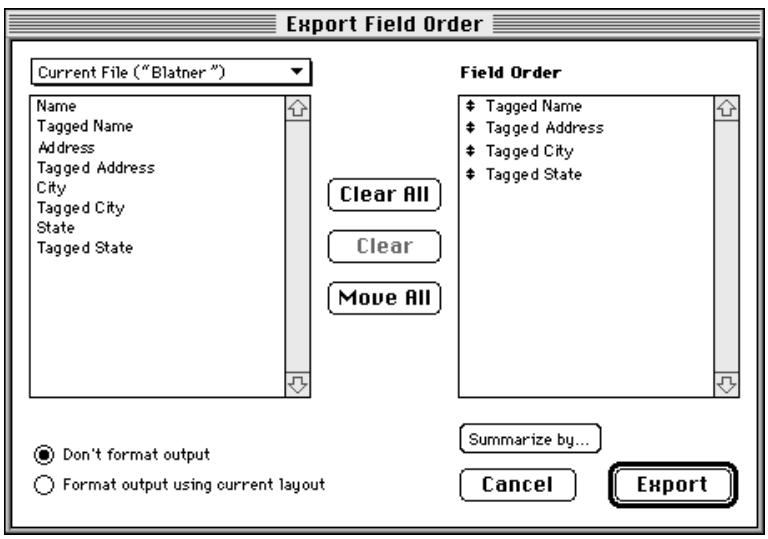
Project 2: Format imported data

Importing data from a database or a spreadsheet is usually a chore, because you have to format all the data manually in QuarkXPress. If you do this task daily or weekly, it's worth taking the time to modify your database or spreadsheet to export XPress Tags alongside the data you're exporting. That way, when you import the text file into QuarkXPress, the text gets formatted automatically. Here's a quick example of how you could do this with a FileMaker Pro database.

1 FileMaker Pro lets you create calculated fields, constructed from data in other fields. For every field you're going to export, use the Define Fields dialogue box to create a new calculated field that attaches an XPress Tag (for example, "@name:" & name). Note that you can make calculated fields invisible so they won't interfere with how your database looks.

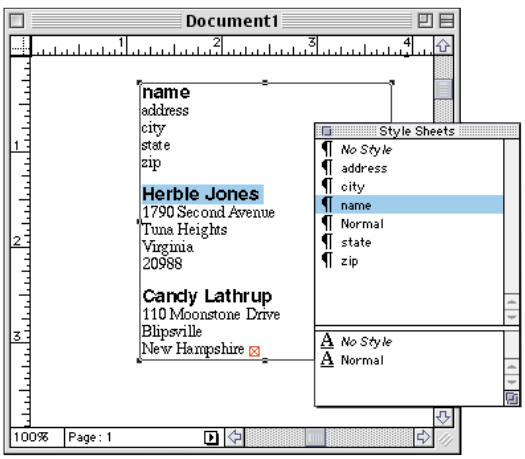


2 When you export your data from FileMaker, specify in the Export Field Order dialogue box to export only the calculated fields, not the original data fields.



3 Import the text file into QuarkXPress via the File menu's Get Text command. In the Get Text dialogue box, check the Include Style Sheets and Convert Quotes check boxes, and QuarkXPress interprets your tags and applies the formatting.

If you're using a spreadsheet program – such as Microsoft Excel – instead of a database, the basic concept is the same. Set up the original data on Worksheet 1, the XPress Tags codes on Worksheet 2, and the final calculated fields on Worksheet 3. When you're ready to export the data, export it from Worksheet 3.



create web

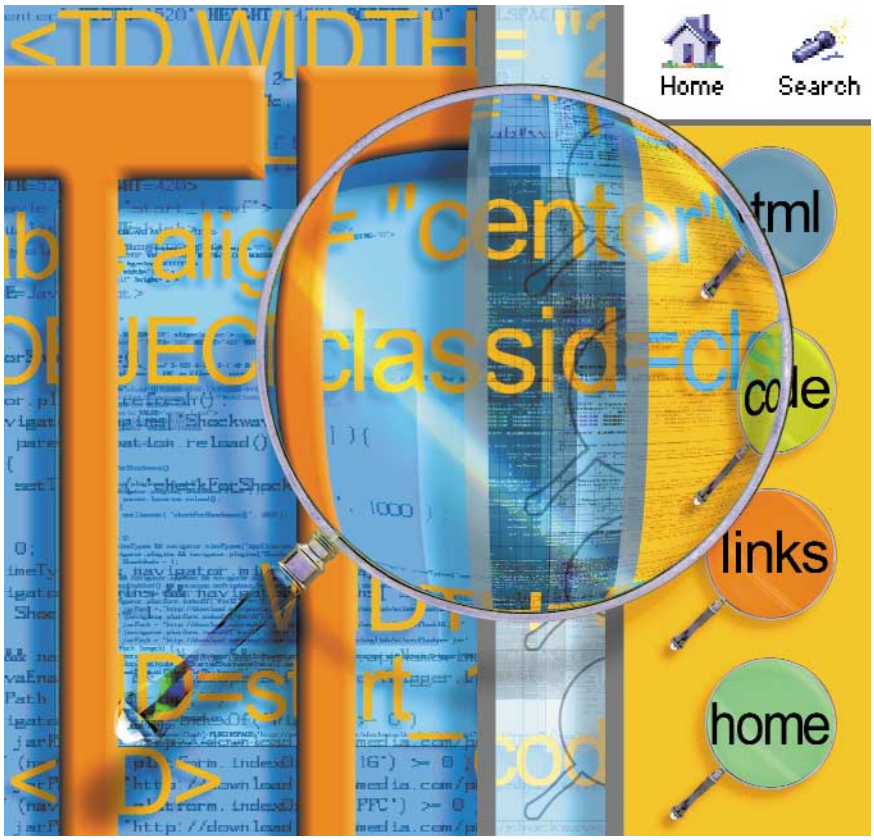
Code breaker

HTML tables give you more alignment options. **By Linda Weinman**

Those used to the flexibility of QuarkXPress or Adobe PageMaker are likely to experience a culture shock when learning to create designs for the Web. That's because alignment tags in HTML simply don't support anything beyond left, right, or centre justification. You can get more-precise alignment with Cascading Style Sheets (CSS), but it comes with a high price – CSS layers aren't compatible with browsers earlier than version 4.0, and Netscape Navigator and Microsoft Internet Explorer support CSS differently. If you use CSS, you have to write the code differently for each browser.

HTML tables come to the rescue. Tables are the next best thing to CSS when it comes to giving you precision alignment. They're also much better than CSS in compatibility, working consistently with multiple platforms and with all version 2 or later browsers.

While tables work beautifully for creating precise alignment, they're not intuitive to program. Fortunately, many WYSIWYG HTML editors, such as Macromedia Dreamweaver and Adobe GoLive, make creating tables a lot easier than doing it by hand-coding.



Tracing the way

Dreamweaver 2 is notable for its innovative approach to alignment – it's the first HTML editor to offer a tracing feature. A tracing image, as Dreamweaver calls it, lets you use an image as a reference for designing a Web page.

For example, if I wanted to position all my links around a semi-circle, I could first draw it in an image editor; save it as a GIF, JPEG, or PNG file; and then bring that drawing into Dreamweaver as a tracing image. Once I have the half-circle tracing image in Dreamweaver, I can use it to position my links along a precise path. Dreamweaver also lets me change the transparency of the tracing image so I can control how much of the image shows through. In addition, I can change its position and hide the tracing image. When I publish my page to the Web, the links show up along a half-circle path, but the tracing image does not appear.

Learn by example

This article shows how to use a page layout created in Adobe Photoshop as a tracing image in Dreamweaver (see "The magic of Dreamweaver 2's tracing images"). Dreamweaver uses CSS layers to create my sample layout.

Since I want all my site visitors to be able to view my page, whether they have a current browser or not, I'll show you how to take an additional step – converting layers into tables. Dreamweaver lets me do this almost effortlessly, giving me the best of both worlds – the precision of layers and the compatibility of tables.

Lynda Weinman is currently writing *Dreamweaver 2 Hands-On Training* (Peachpit Press, August 1999).

continues page 106

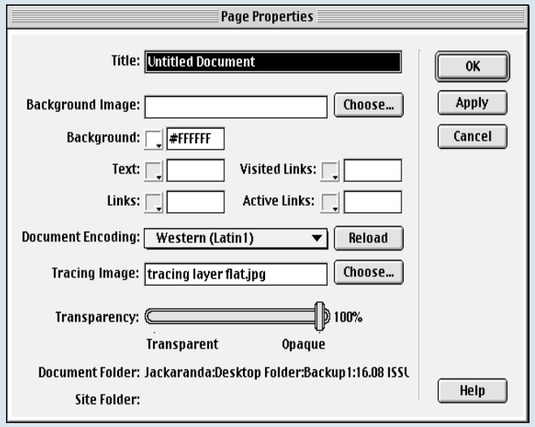
DAVID ANGEL

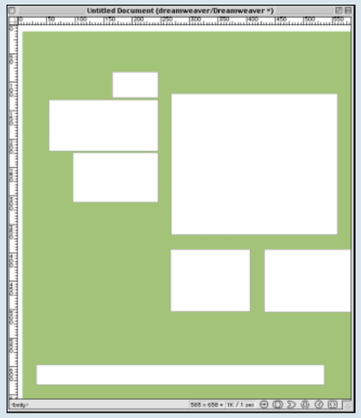
What you need

- Macromedia Dreamweaver 2.
- An image editor – such as Adobe Photoshop.
- A Web browser.

The magic of Dreamweaver 2's tracing images

Dreamweavers 2 makes it easier to create artistic layouts on your Web pages. That's because it has a new feature – the tracing image – that lets you use a mock-up image created in Macromedia Fireworks, Adobe Photoshop, or any other image-editing application as a guide for setting up your layout. The following steps illustrate how to use a tracing image to lay out a page. To prepare your mock-up layout for this process, create it in an image editor and save it as a GIF, JPEG, or PNG file.

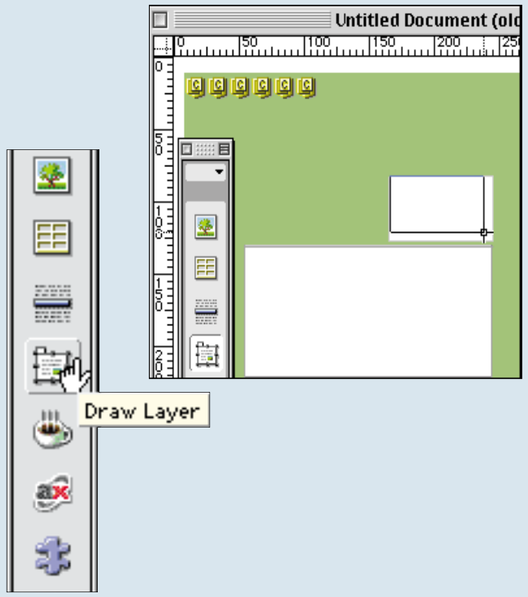




1 Apply a tracing image

A Open a new untitled HTML document in Dreamweaver. Save the document. Select Page Properties from the Modify menu (see top left). Click on the Choose button next to the Tracing Image text box. Navigate to the tracing image you created. Select it and then click on OK.

B The tracing image appears in the background of your page. Note that you can change various settings for the tracing image by selecting Tracing Image from the View menu. The Show setting toggles the tracing image layer off and on. This is helpful when you want to view your background colour or image. The Align With Selection setting lets you align the upper left corner of the tracing image with the upper left corner of a selected object. The Adjust Position setting lets you adjust the exact position of the tracing image by x and y co-ordinates (see top right). By default, an 8-x-11-pixel offset accommodates the offset in the browser window. The Reset Position setting lets you reset the position of a tracing image if you happen to move it.



2 Create layers

Now that you've got a tracing image in place, you can start setting up the page layout using layers. This is where the true power of tracing images and layers begins to reveal itself.

Layers make it possible to get absolute positioning of objects on a page. You can insert images and text inside layers and move them around the page by simply clicking on and dragging the layer. Here are the steps for working with layers in Dreamweaver:

A Click on the Draw Layer button in the Objects palette (see far left).

B Draw a layer around each area in which you want to place an image – in this example, I started with the top box (see left).

TIP As you draw the layers on your page, small yellow icons appear in the upper left corner of the screen. These icons represent the layers you've added. If you prefer to have them hidden, select Invisible Elements from the View menu.

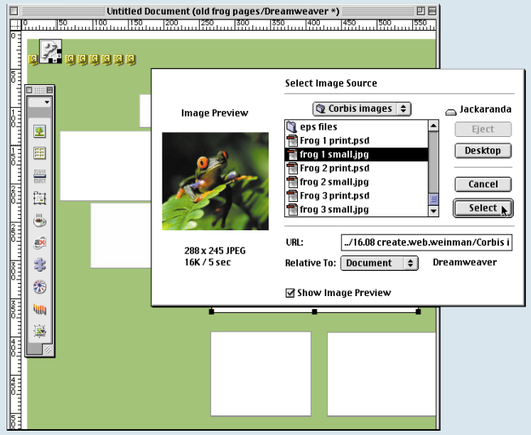
C Click inside a layer and click on the Insert Image button in the Objects palette. Browse to the image you want to insert and click on OK. If you want to add HTML text to a layer, simply click inside the layer and begin typing.

TIP If you want to move layers around the page, make sure you grab them by the handle – the small box in the upper left corner of the layer. If you click-&-drag in the middle of a layer and try to move it, you will more than likely remove the contents from the layer.

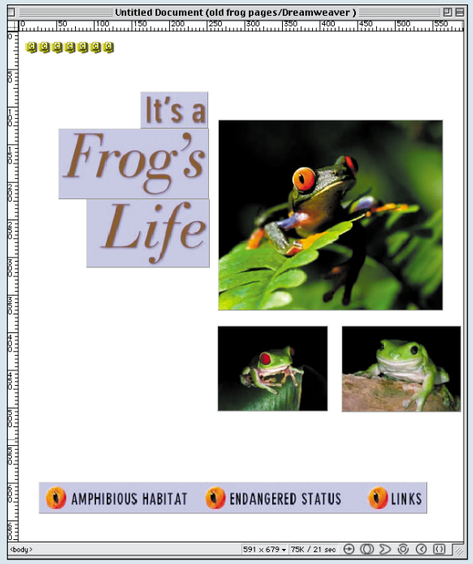
3 Convert layers to a table

Layers are cool, but they don't work on anything less than a 4.0 Web browser. Don't worry – Dreamweaver has a great feature that ensures your Web pages are compatible with earlier Web browsers. With just a few clicks, you can convert the layout you created with layers into a table (see "Setting the table"). Version 2.0 and later Web browsers can handle tables.

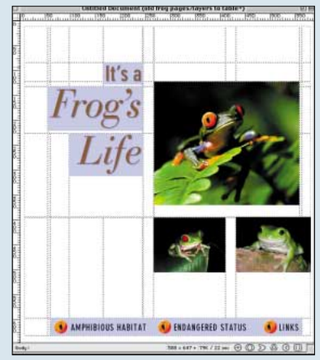
All you have to do is select Convert and then 3.0 Browser Compatible from the File menu. Then select Layers To Table. That's it. Dreamweaver automatically creates a new document and converts your layers into tables. This is nice if you want to save the layers version and the tables version as separate documents.



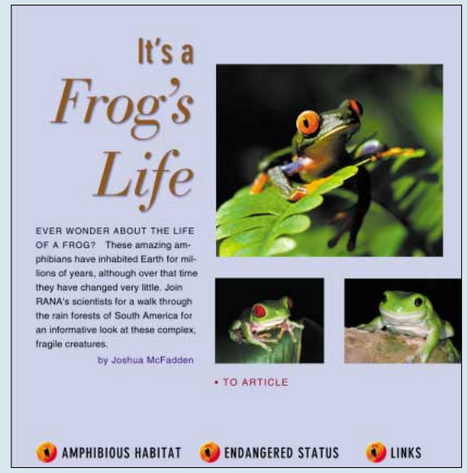
The final stages



The layered look
This is what my page looks like when I use layers to construct the layout.



Setting the table
This table would be tricky to build from scratch. By using the Layers To Table function in Dreamweaver 2, you can create it in a snap.



A star is spawn
The final Web page.

create graphics

Art imitating life

Using real objects in designs adds a personal touch. **By Mike Woodridge**

Digital-illustration, painting, and image-editing applications give artists powerful new tools for creating, but sometimes the software's slick effects and filters can crowd out an artist's personal style. Plus, with stock imagery so readily available, artists may get disconnected from their traditional-media roots, as well as overlook items from everyday life that can contribute nicely to a project.

As a classically trained illustrator, Pamela Hobbs takes care not to let the digital tools she uses command centre stage. She created this collage (right) for *Red Herring* magazine's third-anniversary party.

It is typical of her hybrid style of merging intimate material – a hand-drawn illustration, real flowers, and a vacation photo – with the power of her digital arsenal and stock-photo archives. She's used this hybrid style for clients such as Sony, Nickelodeon, Absolut Vodka, and Tori Amos.

Here, Hobbs created the centrepiece drawing of the Hindu god Shiva with pen and ink. Instead of working with a graphics tablet, she does all of her line drawings by hand and then digitizes them with a scanner. She also likes to experiment with real objects – such as the daisies she scanned in for this piece – to give polished digital art a more spontaneous feel.

For this project, Hobbs used Adobe Photoshop 5.0, Illustrator 8.0, and Dimensions 2.0; Macromedia FreeHand 5.5; stock imagery from PhotoDisc; an Apple Power Macintosh G3; and a Linotype-Hell Saphir scanner.

Mike Wooldrige is a freelance writer and new-media designer.



Creating gods

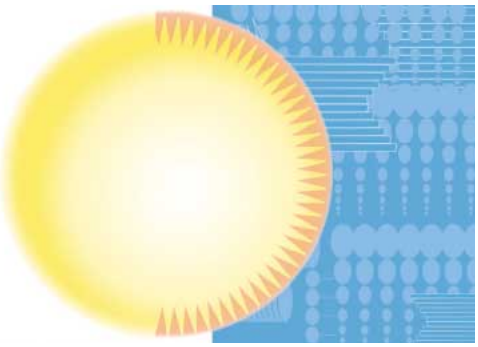
1 Hobbs first drew the image of the Hindu god Shiva with pen and ink. She scanned in the drawing and added colour to it in Photoshop, using gradient colour fills to give it a 3D look.

Next, she created the blue background shapes in FreeHand, successively scaling coloured circles in equal increments to generate patterns of shrinking dots (right).

To make the spiked orange half-circle behind Shiva, she created a triangle and a circle in Illustrator and duplicated the triangle around the circle's perimeter in 5-degree increments.

Then she added a radial gradient fill in Photoshop to create the startling yellow sunburst.

continues page 111



Creating gods (continued)



2 Hobbs then scanned in red and white gerbera daisies. She laid the flowers on the scanner and covered them with a white cloth to minimize shadows and facilitate the masking of them in Photoshop.

She then used Photoshop's Color Balance feature to change the red daisies' colour to a golden orange that echoed the hues of the sunburst and frame.



3 Next, Hobbs co-opted the saxophone, guitar, globe, Martini glass, and picture frame from PhotoDisc stock-image collections. She trimmed the frame's edges and reassembled it in Photoshop. She then used a Photoshop layer-mask and black-to-white gradient to fade the musical instruments into the background.





4 The Buddha image is from a photo the artist took while on vacation in Japan. After scanning in the photo, Hobbs clipped the Buddha from its background in Photoshop, added highlights with the Dodge tool, and adjusted the colour in the Saturation dialogue box. She then created the 3D number three in Dimensions and exported it to Photoshop, adding highlights with the Dodge and Burn tools.

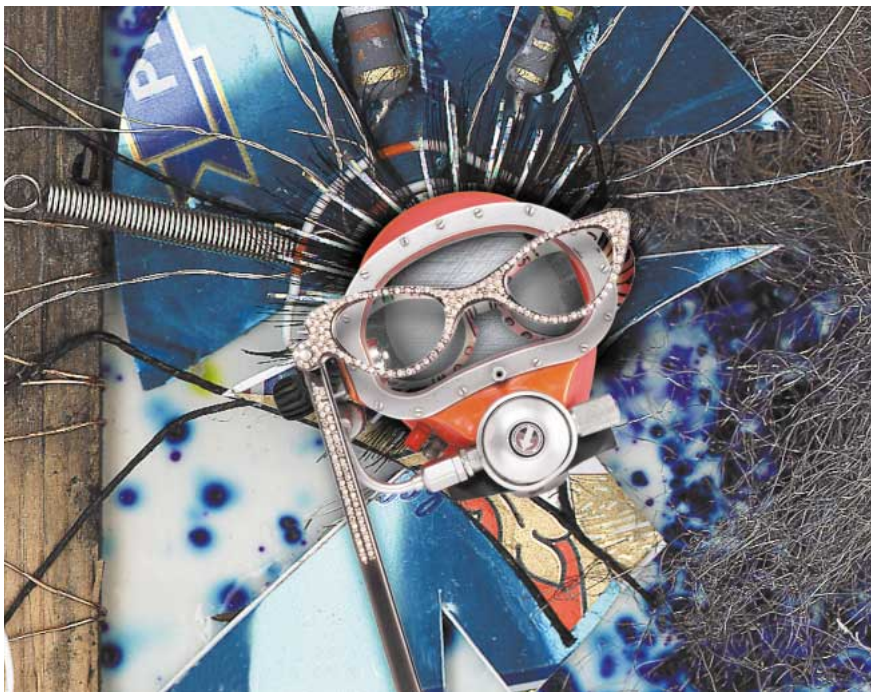
secrets

Cloaked killers

Are desktop icons vanishing? Invisible files may be to blame. **By Ted Landau**

Like stagehands working behind the scenes of a play, there's a hidden world of invisible files on your Mac. Don't be alarmed – they're supposed to be in hiding. What's more, without them your Mac might not even start up.

So, why bother to shroud these files with a cloaking device? The usual reason is to protect them against inadvertent, or intentional, modification. However, on a few occasions, finding these files is necessary. An invisible file can get corrupted, preventing an application from working, or more rarely, it may be a virus. In such cases, you need to repair or delete the file. For the scoop on how to access invisible files, check out "Hide and seek". Then take a peek behind the curtain of your Mac and learn how to solve a variety of Macintosh ills.



KARL HERSHALL

Invisible follies

Have you ever had files lose their custom icons? Invisible files may be at work or, more precisely, may not be working as they should. You can usually trace the loss of custom icons to the invisible Desktop DB and Desktop DF files at the root level of every drive. These two files get updated whenever you rebuild the desktop. In fact, that's exactly what you must do to fix them – hold down ⌘-option at start-up to do a rebuild.

If that doesn't do the trick, you can trash these files altogether. The Mac builds new ones from scratch the next time you start up. The simplest way to trash them is with a utility such as TechTool, from MicroMat Computer Systems (01933 313 093, **www.micromat.com**), via its Desktop Rebuild command.

Inflexible folder icons Just as icons can disappear, they can also refuse to go away. If you can't replace or delete a particular folder's custom icon, the problem may be a hidden file named "icon". Your Mac creates one of these files every time you give a folder a custom icon and stores the file in that folder. If you have trouble trying to change a folder's icon, just delete its icon file.

Finder crashes Finder freezes and crashes can happen for any number of reasons. One possibility is that you may have a misplaced copy of the invisible OpenFolderListDF file. This file, which comes with Mac OS 8.0 and later versions, keeps track of which Finder windows you leave open at shutdown and whether they are pop-ups.

Normally, the Preferences folder of your start-up disk holds one copy of this file and other copies appear at the root level of every other disk. Sometimes an extra copy shows up at the root level of the start-up disk. Apple has stated that the extra copy presents no problem. However, many Macintosh users have found that deleting it eliminates the freezes.

Erroneous crash message After a system crash, if you have Shut Down Warning enabled in the General Controls control panel, your Mac displays a message at start-up informing you of the crash. But your Mac isn't supposed to display this message after every start-up. If you have this problem, the likely invisible culprit is the Shutdown Check file.

The Mac creates this file at each start-up and then deletes it at each proper shutdown (one performed with the Mac's Shut Down command). When the Mac finds this file at start-up, it assumes there was an improper shutdown and displays the warning message. If this message appears at every start-up, it may be that the Shutdown Check file has become corrupted and the Mac can't delete it automatically. The solution is simply to delete the file yourself.

Unloadable extensions When a particular extension doesn't load at start-up, damaged or misplaced invisible files are often the culprits.

For example, when Adobe Type Manager refuses to load, claiming that it requires more memory, you may have a corrupted ATM Temp.ATM file. You'll find this file in the Preferences folder. Delete it, and ATM creates a new one.

If you move Connectix's RAM Doubler control panel to a new System Folder and find that it no longer loads at start-up, it's probably because you didn't move the invisible Load RAMDblr file (located at the root level of the System Folder) along with it.

To get things working, you need to either reinstall RAM Doubler from its

continues page 116

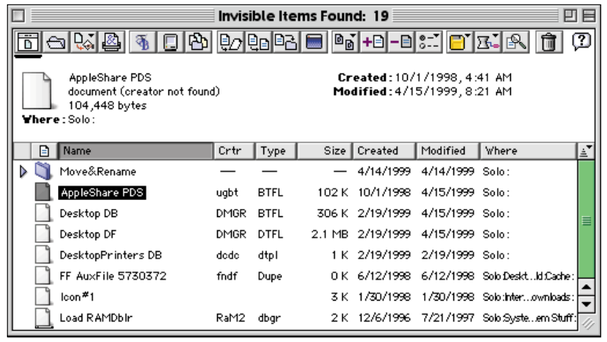
Q&A &Tips colour drops • Sherlock • online security

Finding the unseeable

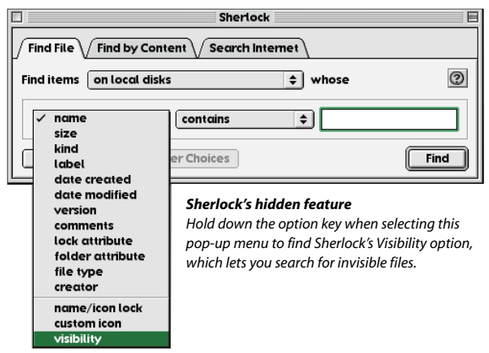
Appropriately enough, the easiest way to get a list of all the invisible files on your drive is to use an invisible feature of Sherlock. From Sherlock's Find File panel, hold down the option key when clicking on the Name pop-up menu. The very last item is Visibility (see "Sherlock's hidden feature"). Select it. Then click on Find and you'll get the list. To delete a file, select it and press ⌘-delete.

Unfortunately, Sherlock doesn't let you do much else with this list. To work extensively with invisible files, you'll need a utility such as File Buddy, something you can get from **www.macdownload.com**. Start by selecting Find Invisible Items from File Buddy's Cleaning menu and then clicking on Search. You can now use File Buddy's button bar to manipulate the files (see "File Buddy's magic tricks"). For example, to make a file visible, click on the Reveal Selected Items In The Finder button. However, be careful: some invisible files function only when they're invisible.

If you want to examine the contents of the file, open it via File Buddy's Open With button, assigning an application such as BBEdit to open the file.



File Buddy's magic tricks
With File Buddy, you can reveal, open, copy, move, or delete any invisible file. You can also access a file's Get Info window.



Sherlock's hidden feature
Hold down the option key when selecting this pop-up menu to find Sherlock's Visibility option, which lets you search for invisible files.

master disk or drag the Load RAMDblr file to the new System Folder.

Virus attack Excessive disk activity, corrupted files, and unexpected restarts are just some examples of the possible symptoms of the AutoStart virus – so named because it is able to infect your Macintosh only if you have QuickTime 3.0's AutoPlay feature enabled.

The virus typically arrives on your disk in the guise of two invisible files: DB (located at the root level of your start-up disk) and Desktop Print Spooler (which is found in the Extensions folder).

The names of these files make them sound harmless. Indeed, there is a valid visible file in your Extensions folder called Desktop Printer Spooler – but don't let the monikers fool you. If you find these files, trash them instantly. Or use any up-to-date anti-virus utility to get rid of them.

Once you take some time to become familiar with the Mac's invisible world, you'll see Mac troubleshooting in a whole new light. MW

Ted Landau is clearly visible every day, at www.macfixit.com.

Macworld's **features editor David Fanning and contributing editor Lon Poole answer readers' questions and select reader-submitted tips for this column. Send your question or tip (include your address and phone number) to David Fanning, Q&A, *Macworld*, 99 Gray's Inn Road, London WC1X 8UT. You can also send mail electronically, marked Q&A in the subject line, to david_fanning@macworld.co.uk or via fax to 0171 405 5308. We pay £25 for each tip published here.**

We cannot make personal replies, so please do not include a stamped-addressed envelope.

Custom print with ease

Tip How would you like to print a particular file, but skip the Print command, not open the file, and not even launch an application – yet use your custom print options every time you need to print it?

It's easy if your printer has a desktop icon. Say you have a file that you need to reprint regularly – for example, a customized envelope layout featuring your logo and address. Every time you need a few envelopes, you have to open the file, select your print options (five copies, best quality, colour, and so forth), and send it to print.

Make it easy on yourself. The next time you open the file, select all the print options you want, click Print, and immediately open the desktop printer. Select the print request for that document, and click the red Hold button – it looks like a VCR's pause button. If the print request is at the top of the printer window, you can also put it on hold by dragging it to the bottom of the window.

Now duplicate the print request by pressing ⌘-D or choosing Duplicate from the File menu; you can instead control-click the print request and choose Duplicate from its contextual menu.

This makes a copy of the print request, with all of its particular settings. Next, send the duplicate print request to the printer, by dragging it to the top of the printer window or selecting it and clicking the green Resume button – it looks like a VCR's play button. The original print request remains on hold, ready for the next time you need to use it.

You can repeat this procedure for other documents – or for the same document with different print options, such as more or fewer copies – and put as many print requests on hold as you need.

Dispose of duplicates

Q **A friend used Aladdin Systems' Spring Cleaning to find duplicate files, and it reported that Adobe Illustrator and Adobe Photoshop carried the same plug-ins. Can he delete the duplicate plug-ins from one program? Also, if I keep two versions of the same program in different folders, can I delete duplicate program files from one version's folder?**
Cleto Criste

A If you merely remove plug-ins or other files from an application's folder or sub-folders, you'll lose the features they provide. But you can replace some Illustrator plug-ins with aliases of Photoshop plug-ins, thus using the same plug-in for both. The plug-ins you can replace are in two sub-folders of each application's main plug-ins folder. In Illustrator, the sub-folders are Photoshop Effects and Photoshop Filters. In Photoshop, the sub-folders are Effects and Filters. Rather than deal with individual files, you can replace the two subfolders in Illustrator with aliases of the two sub-folders in Photoshop.

To be safe, don't immediately delete files or folders you're replacing with aliases. Keep the originals in an archive folder or on a removable disk until you're sure the replacements work correctly.

Aliases of Photoshop plug-in files also work in Adobe PageMaker (where the folder path to the replaceable files is PageMaker: RSRC: Plug-ins: Effects), Macromedia Director (folder path Director: Xtras: Filters), and Macromedia FreeHand (folder path System Folder: Macromedia: Xtras). A similar manoeuvre works with duplicate plug-ins in Web browsers.

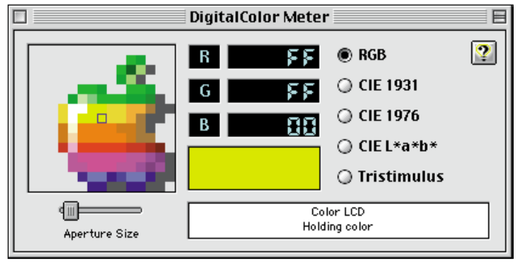
You may run into trouble if you apply this tactic indiscriminately with duplicate auxiliary files in different versions of a program. Files that look like duplicates may not be, and replacing one file with an alias of the other may cause one or both versions of the program to malfunction. If you replace one auxiliary file with the alias of another, absolutely identical one that's housed with a different version of the same application, both versions may not run at the same time. This restriction may already exist if both versions use the same preferences file from the System Folder.

Pick up any colour

Tip You don't need any extra software to pick up colour from anywhere on the screen and export it to a Web page. Simply click the Apple Colors tab or the Real Web Colours tab in GoLive's Color Palette, hold down the option key to turn the pointer into an eyedropper, and drag over any colour on the screen; release the mouse button when you have the colour you want.

A similar trick works in any application that uses Mac OS 8.X's Color Picker, but instead of option-dragging, you option-click to pick up a colour. For example, you can set Photoshop to use the Apple Colour Picker (File: Preferences: General: Color Picker). Then click the foreground or background colour box in the Photoshop tool bar (or double-click the foreground or background colour in the Photoshop Color palette) to bring up the Apple Color Picker, and option-click anywhere on screen.

For more-precise colour pick-up, use Apple's free DigitalColour Meter 1.2 program (included with Mac OS 8.5 – check the Monitors Extras Folder in the Apple Extras folder) or the freeware Coloristic from Bubble Pop Software (download it from **www.bubblepop.com**) to measure the HTML value of any displayed colour, as shown in "Web Colour Pickup." Point to the colour you want, and press ⌘-H in DigitalColour Meter to hold the colour, or press caps lock in Coloristic to lock onto the colour. Copy the colour value by pressing ⌘-C. Then switch to GoLive, select the Value field in any of the three Web Colours tabs in the Color Palette, and paste.





Web colour-pick-up
Apple's DigitalColour Meter 1.2 (top) and Bubble Pop's Coloristic (left) can grab the HTML value of any colour. In DigitalColor Meter, select the RGB option and choose Show RGB As Hex Value from the Meter menu. In Coloristic, set the Color Format option to Internet (HTML), using the Preferences command on the Edit menu.

Get digital ruler read outs

Tip Here's a way to get precise measurements of items in Microsoft Word 6 and 98 documents. The ruler in these versions of Word normally gives you an analogue reading for the position of tabs, indents, columns, and table cells. If you'd like to set the position of these items digitally, just hold down the option key while dragging a ruler item. A precise numeric display of the distance between adjacent ruler items replaces the normal ruler markings.

Protect your online database

Tip If you use FileMaker Pro's Web Companion plug-in to publish your database on the Web, be careful what permissions the passwords allow. Even if your database Web pages have no visible means of deleting records – such as a Delete button – you're at risk. Anyone who views your database from a Web browser and uses a password with permission to delete records can easily do so by making a simple change to the URL in the browser window. For example, when a browser displays a product record from the Shopping Cart database sample included with FileMaker Pro, a URL like the following appears in the browser's address bar or location bar: www.yourdomain.com/shopping_cart/FMPro?db=products.fp3=33071&-find.

If all the passwords for this database allow permission to delete records (or if the database doesn't require passwords), any Web surfer can change "-find" at the end of the URL to "-delete," press return, and delete the record. Protect your database by turning off permission to delete records for all passwords except those of trusted individuals.

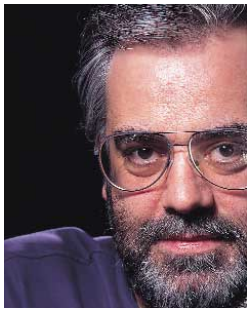
Make Sherlock snappier

Tip Mac OS 8.5's Sherlock is a much better searching tool than older systems' Find File feature. However, here's a problem I've had with Sherlock – and a slick work-around.

When searching for a file by name in Mac OS 8.1, I fell into the habit of pressing ⌘-F in the Finder and immediately typing the file name before Find File opened. I still use the same process in Mac OS 8.5, but since Sherlock takes even longer to open (at least on my machine), my advance typing ends up in the Search Internet tab or whichever tab opened last. I discovered I could combat this by using Sherlock's keyboard shortcuts for selecting a tab: ⌘-F for Find File, ⌘-G for Find By Content, and ⌘-H for Search Internet.

Now I press ⌘-F twice in the Finder to open Sherlock and pre-select the Find File tab. While Sherlock is launching, I type the entire file name, press return, and see the results almost as soon as Sherlock finishes opening. MW

Peter Worlock



The iBook is all style and little substance – it's destined for success.

Brought to iBook

The Internet is a wonderful thing. From time to time. When it isn't, it's a blasted, infernal nuisance that doesn't work. Courtesy of the Internet I was able to watch Steve Jobs' keynote speech at New York's Macworld Expo from the comfort of my study within hours of it happening. I saved myself more than £1,000 on airfares, hotel rooms, New York taxis, and sundry other expenses. Of course, I'm also missing a few parties, but there's a bottle of Jack Daniels within a few paces of my desk if I feel the need.

This virtual experience of show-going has so much in its favour: you have to fear for the future prospects of all such computer industry events. As more and more of the industry's products enhance the Internet experience – thereby enabling more and more of this kind of long-distance virtuality – I'm sure that many of us will decide to save the money and the time and skip the actual attending of Expos and other industry events.

Of course, here in the UK, if Apple screws around any further with our humble (and getting humbler) version of the Mac love-in, a small text-file and a single digital photo will be enough to convey the entire experience.

As I write, the full flavour of the Big Apple Applefest hasn't yet emerged, but Jobs' keynote gives us plenty to be going on with, including the Big Hoohah, the iBook. But let's save that for last.

In the meantime, there's Mac OS version whatever. I've given up counting – the only thing that matters now is OS X. Quite why Apple is bothering with anything else is beyond me: we've waited far too long for Apple to deliver a decent, reliable operating system and we've at least another year to go. This annual diddling around with the OS looks like nothing more than a barefaced attempt to fleece a few dollars out of a few million loyal customers who will buy anything Jobs waves under their noses. I can't remember the last upgrade to the Mac operating system that had anything really worthwhile.

There's QuickTime TV. Or to put it another way, there isn't QuickTime TV. There's QuickTime 4, a very nice piece of software, there's a Steve Jobs marketing concept, and there's the same old bunch of demo streaming-content on the QuickTime Web site that's been up there since QT4 launched months ago. BBC World has a timeless bit about buying helicopters, Fox Sports has the same post-Wimbledon interview with Pete Sampras it's been running since, well, Wimbledon. Be still my beating heart.

This is not to denigrate QuickTime or the concept of streaming media – a subject I'll return to in a future column. Perhaps sometime we'll get something that merits the name QuickTime TV – but we don't have it yet.

And so to the iBook. The post-keynote reporting is unanimous: the crowds loved it. Oh, wow, yeah. And there *are* some things to love. It's ruggedly designed for the education market. The built-in ethernet is good. It's pretty cheap for a portable (which is to say, merely expensive instead of ohmygodareyoukiddinghowmuch!?). The Airport wireless networking is certainly one of the most interesting developments, but space limitations here mean it, too, will have to wait for a future column for due consideration.

Then there are some things that aren't so endearing. The hard drive (3.2GB) is less than generous, and the memory (32MB) is almost laughable. The lack of floppy disk, PC Card slot, swappable CD drive or adaptor for an external monitor makes the iBook look more built down to a price than built right for a target audience. And a single USB port to accommodate everything from a proper mouse and keyboard to a printer, scanner, digital camera and microphone looks ridiculous.

Then there's the design. "Swoon" is not a word I've used much in my career but there's no other word for the reaction of some reporters in New York. Others, though, have been downright pervily pornographic on the subject of the iBook's rubber bits and curved case. All are united in their love of the "slender", "slimline", "elegant" portable. Excuse me? This thing is elephantine. It is the most lardy-assed portable computer since the original Mac Portable.

I'm less than impressed. The iBook is the ugliest, most offensive piece of product design I've seen in years. It's a Ferrari badge on a plastic-shelled car kit on a Ford Escort chassis. It is the computer embodiment of our vacuous spin-doctored, hype-ridden age – the triumph of presentation over meaning, form before function. It's millennial decadence, the emperor's new clothes.

I'm sure it will be a huge success. MW